

GenCore version 5.1.8  
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OM protein - protein search, using sw model

Run on: May 21, 2006, 12:31:21 ; Search time 120.333 Seconds

(Without alignments)  
129.186 Million cell updates/sec

Title: US-10-632-366-1

Perfect score: 191  
Sequence: 1 DVSTPPTVLPDNFRPRYPVGKFFQYDTWKSTQRL 34

Scoring table: BLOSUM62  
Gapop 10.0 , Gapext 0.5

Searched: 2589679 seqs, 457216429 residues

Total number of hits satisfying chosen parameters: 2589679

Minimum DB seq length: 0  
Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%  
Maximum Match 100%

Listing first 45 summaries

Database :

A\_Geneseq.8:\*  
1: geneseqp1980s:\*  
2: geneseqp1990s:\*  
3: geneseqp2000s:\*  
4: geneseqp2001s:\*  
5: geneseqp2002s:\*  
6: geneseqp2003as:\*  
7: geneseqp2003bs:\*  
8: geneseqp2004s:\*  
9: geneseqp2005s:\*  
10: geneseqp2006s:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

#### SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	191	100.0	34	4	AAB31481
2	191	100.0	34	4	ADM35841
3	191	100.0	34	8	ADM96218
4	191	100.0	35	4	AAB91207
5	191	100.0	155	9	AED59621
6	191	100.0	156	9	ADY90292
7	191	100.0	180	1	AAE60579
8	191	100.0	180	3	AA70364
9	191	100.0	180	5	ABG96345
10	191	100.0	180	5	ABP54951
11	191	100.0	180	6	ABR48184
12	191	100.0	180	6	AAE33320
13	191	100.0	180	7	ABU61624
14	191	100.0	180	7	ADB80535
15	191	100.0	180	7	ADD46367
16	191	100.0	180	7	ADN38881
17	191	100.0	180	8	ADP47499
18	191	100.0	180	8	ADH17912
19	191	100.0	180	8	ADJ58605
20	191	100.0	180	8	ADR08576
21	191	100.0	180	8	ABM81211
22	191	100.0	180	8	ABO84532
23	191	100.0	180	8	ABO84532

24	191	100.0	180	8	ADQ39470	Adq39470 Human myo
25	191	100.0	180	9	ADY86802	Ady86802 Human IGF
26	191	100.0	180	9	AEA89444	Aea89444 Human ins
27	191	100.0	180	9	AED08781	Aed08781 Human ins
28	191	100.0	180	10	AEF05090	Aef05090 Human ins
29	191	100.0	262	5	ABP69409	Abp69409 Human pol
30	191	100.0	275	5	AED74143	Aed74143 Human pla
31	187	97.9	33	4	AAB31484	Aab31484 Amino aci
32	186	97.4	180	1	AAE93525	Aap93525 Sequence
33	182	95.3	32	4	AAB31485	Aab31485 Amino aci
34	177	92.7	31	4	AAB31486	Aab31486 Amino aci
35	175	91.6	180	7	ADD25496	Add25496 Binding d
36	172	90.1	30	4	AAB31487	Aab31487 Amino aci
37	168	88.0	29	4	AAB31488	Aab31488 Amino aci
38	163	85.3	28	4	AAB31489	Aab31489 Amino aci
39	158	82.7	27	4	AAB31490	Aab31490 Amino aci
40	150	78.5	34	4	AAB31483	Aab31483 Mouse pre
41	150	78.5	34	8	ADM35843	Adm35843 Mouse pre
42	150	78.5	34	8	ADM96216	Adm96216 Murine pr
43	150	78.5	353	8	ABO84530	AbO84530 Mouse can
44	147	77.0	26	4	AAB31491	Aab31491 Amino aci
45	142	74.3	25	4	AAB31492	Aab31492 Amino aci

#### ALIGNMENTS

RESULT 1	
AAAB31481	
ID	AAAB31481 standard; peptide; 34 AA.
XX	
AC	AAAB31481;
XX	
DT	20-APR-2001 (first entry)
XX	
DE	Amino acid sequence of human preproinsulin peptide.
XX	
KW	Bioactive peptide; preproinsulin; pancreatic islet beta-cell;
KW	glucose-mediated insulin secretion; insulin synthesis; type II diabetes;
XX	glucose mediated insulin secretion.
OS	Homo sapiens.
XX	
PN	W0200078805-A1.
XX	
PD	28-DEC-2000.
XX	
PF	19-JUN-2000; 2000MO-NZ000102.
XX	
PR	18-JUN-1999; 99NZ-00336359.
XX	
PA	(COOP/) COOPER G J S.
XX	(BUCH/) BUCHANAN C M.
XX	
PI	Cooper GJS, Buchanan CM;
XX	
DR	WPI, 2001-112313/12.
DR	N-PSDB; AAF24865.
PT	New mammalian peptide with preproinsulin functionality, useful for preventing
PT	or treating Type 2 diabetes mellitus by stimulating insulin secretion.
XX	
XX	Claim 3; Page 27; 51dp; English.
XX	
CC	The present sequence represents a human preproinsulin peptide. The peptide
CC	corresponds to Arg69-Leu102 of the proIGF-II E peptide. Preproinsulin is
CC	secreted by pancreatic islet beta-cells which enhances glucose-mediated
CC	insulin secretion. Preproinsulin peptides and their analogues are useful in
CC	preparing medicaments for preventing or treating a condition which
CC	results in or involves deficient insulin synthesis, secretion or action
CC	e.g. type II diabetes. Antibodies specific to preproinsulin peptides are useful
CC	in an immunological assay such as radioimmunoassay (RIA), IRMA
CC	(undefined) or Enzyme linked immunosorbent assay (ELISA) for

CC quantitatively measuring preptin in a biological fluid preferably in  
 CC cerebrospinal fluid. Agonists or antagonists of preptin peptides are  
 CC useful for modulating glucose mediated insulin secretion  
 CC  
 CC Sequence 34 AA;  
 SQ

Query Match 100.0%; Score 191; DB 4; Length 34;  
 Best Local Similarity 100.0%; Pred. No. 4.8e-19;  
 Matches 34; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 DVSTPPTVLPDNFPRYPVGKFFQYDTWKSTQRL 34  
 1 DVSTPPTVLPDNFPRYPVGKFFQYDTWKSTQRL 34  
 Db

RESULT 2  
 ADM35841  
 ID ADM35841 standard; peptide; 34 AA.  
 AC ADM35841;  
 XX  
 XX  
 XX  
 DT 03-JUN-2004 (first entry)  
 XX

DE Human preptin, SEQ ID NO:1, useful for treating beta-cell disorders.  
 XX  
 KW Human; preptin; pancreatic islet beta-cell; fibroblast; proliferation;  
 KW differentiation; beta-cell disorder; diabetes; insulin resistance;  
 KW insulin resistance; insulin secretion disorder; hyperglycaemia; wound;  
 KW burns; ulcer; mucous membrane disruption;  
 KW peripheral nervous system injury; Alzheimer's disease;  
 KW Parkinson's disease; stroke; amyotrophic lateral sclerosis;  
 KW muscular dystrophy; diabetic neuropathy; myocardopathy; myocarditis;  
 KW myocardial infarction; cardiac disease; acute renal insufficiency;  
 KW ischaemia; antidiabetic; vulnuerary; antitumor; antiinflammatory;  
 KW gastrotestestinal; nootropic; neuroprotective; antiparkinsonian;  
 KW cerebroprotective; muscular; cardiant; nephrotropic; dermatological;  
 KW protein therapy.  
 KW  
 XX  
 XX  
 OS Homo sapiens.  
 XX  
 XX  
 PN MO2004012761-AA.  
 XX  
 XX  
 PD 12-FEB-2004.  
 XX  
 XX  
 PF 01-AUG-2003; 2003WO-NZ000171.  
 XX  
 XX  
 PR 01-AUG-2002; 2002NZ-00520536.  
 PR 01-AUG-2002; 2002US-0400445P.  
 XX  
 XX  
 PA (PROT-) PROTEMIX CORP LTD.  
 XX  
 XX  
 PI Cooper GJS, Buchanan CM, James GC;  
 XX  
 XX  
 DR WPI; 2004-157011/15.  
 XX  
 PT Use of preptins, preptin analogs, preptin agonists, their salts or  
 PT derivatives, for treating a mediated disease, disorder or condition  
 PT mediated in whole or in part by beta-cells or beta-cell dysfunction, e.g.  
 PT ulcers or inflammation.  
 PT  
 XX  
 PS Claim 2; SEQ ID NO 1; 63pp; English.  
 XX  
 XX  
 CC The invention relates to a method for treating a disorder mediated by  
 CC pancreatic islet beta-cells or beta-cell dysfunction by administering  
 CC preptins (ADM35841-ADM35843), preptin analogues, preptin agonists or  
 CC salts or derivatives thereof. Preptins are able to stimulate the  
 CC proliferation and differentiation of beta-cells and fibroblasts.  
 CC Preptins, preptin analogues, preptin agonists, their salts and  
 CC derivatives are useful in the treatment of internal or external injuries  
 CC or wounds (e.g., burns, ulcers, surgical wounds or mucous membrane  
 CC disruption); conditions characterised by decreased beta-cell mass or  
 CC number; beta-cell mediated diseases (e.g., type 1 or type 2 diabetes);  
 CC and conditions characterised by insulin resistance, undestirably low

CC insulin secretion, hyperglycaemia or post-prandial hyperglycaemia. They  
 CC may also be used for treating and/or preventing peripheral nervous system  
 CC injury; Alzheimer's disease; Parkinson's disease; stroke; amyotrophic  
 CC lateral sclerosis; muscular dystrophy; diabetic neuropathy;  
 CC myocardiopathies such as myocarditis and myocardial infarction; cardiac  
 CC disease and acute attack; and acute renal insufficiency caused by  
 CC ischaemia. They are additionally useful for increasing or maintaining  
 CC beta-cell mass or beta-cell number; for stimulating beta-cell  
 CC proliferation via cell differentiation or neogenesis; for increasing type  
 CC cell mass via cell differentiation or neogenesis; for decreasing cell  
 CC death of motor neurons; for increasing muscular end plates; promoting the  
 CC functional recovery of damaged sciatic nerves; preventing peripheral  
 CC motor paralysis during or as a result of chemotherapy; and for improving  
 CC myocardial function. The present sequence represents human preptin, which  
 CC is specifically claimed for use in the method of the invention.  
 CC  
 CC Sequence 34 AA;  
 SQ

Query Match 100.0%; Score 191; DB 8; Length 34;  
 Best Local Similarity 100.0%; Pred. No. 4.8e-19;  
 Matches 34; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 DVSTPPTVLPDNFPRYPVGKFFQYDTWKSTQRL 34  
 1 DVSTPPTVLPDNFPRYPVGKFFQYDTWKSTQRL 34  
 Db

RESULT 3  
 ADM96218  
 ID ADM96218 standard; peptide; 34 AA.  
 AC ADM96218;  
 XX  
 XX  
 XX  
 DT 17-JUN-2004 (first entry)  
 XX  
 XX  
 DE Human preptin peptide used to treat various bone conditions SeqID 3.  
 XX  
 XX  
 KW osteoblast growth; osteoblast apoptosis; preptin;  
 KW prolinsulin-like growth factor II; osteopathic; osteoporosis; osteopenia;  
 KW osteogenesis imperfecta; primary hyperparathyroidism; endocrine disorder;  
 KW corticosteroid treatment; autoimmune arthritis; drug use; human.  
 KW  
 XX  
 XX  
 OS Homo sapiens.  
 XX  
 XX  
 PN MO2004012760-AA.  
 XX  
 XX  
 PD 12-FEB-2004.  
 XX  
 XX  
 PF 31-JUL-2003; 2003WO-NZ000168.  
 XX  
 XX  
 PR 01-AUG-2002; 2002US-0400443P.  
 XX  
 XX  
 PA (AUCK-) AUCKLAND UNISERVICES LTD.  
 XX  
 XX  
 PI Cornish J, Reid IR, Cooper GJS, Buchanan CM;  
 XX  
 XX  
 DR WPI; 2004-157010/15.  
 XX  
 PT Use of preptin, preptin analog or preptin agonist for treating a bone  
 PT condition (e.g. osteoporosis or osteopenia), increasing or maintaining  
 PT bone density, stimulating osteoblast growth, or modulating osteoblast  
 PT apoptosis.  
 PT  
 XX  
 PS Claim 2; SEQ ID NO 3; 29pp; English.  
 XX  
 XX  
 CC This invention relates to a novel method for treating a bone condition.  
 CC Specifically, it refers to increasing or maintaining bone density, the  
 CC stimulating osteoblast growth, or modulating osteoblast apoptosis. The  
 CC present invention comprises administering preptin, a preptin analogue or  
 CC agonist thereof, which corresponds to residues Asp-69 to Leu-102 of the  
 CC prolinsulin-like growth factor II that is co-secreted with insulin from  
 CC pancreatic islet beta cells in response to glucose. Accordingly, such  
 CC compositions that exhibit osteopathic activities can be used to treat or



KM Protease; immune disorder; inflammation; musculoskeletal disease;  
 KM dermatological disease; gastrointestinal disease; endocrine disease;  
 KM metabolic disorder; cancer; hematological disease;  
 KM cardiovascular disease; neurological disease; neurodegenerative disease;  
 KM growth disorder; respiratory disease; genitourinary disease;  
 KM gynecological disorder; nutritional disorder; infection; cytostatic;  
 KM gastrointestinal-gen.; antiinflammatory; antispasmodic; analgesic;  
 KM antidiabetic; osteopathic; antidiabetic; nephrotoxic;  
 KM cardiovascular-gen.; immunosuppressive; respiratory-gen.; antipruritic;  
 KM antiallergic; dermatological; enzyme; hydrolysis.  
 XX  
 OS Homo sapiens.  
 XX  
 XX WO2004113522-A1.  
 PN  
 PD 29-DEC-2004.  
 XX  
 PF 18-JUN-2004; 2004WO-EP051173.  
 XX  
 PR 18-JUN-2003; 2003EP-00013819.  
 XX  
 PR 10-NOV-2003; 2003EP-00025851.  
 PR 11-NOV-2003; 2003EP-00025871.  
 PR 11-FEB-2004; 2004EP-00003058.  
 XX  
 PA (DIR-) DIREVO BIOTECH AG.  
 PI Haupts U, Kolermann A, Scheidig A, Voetsmeier C, Ketting U;  
 DR WPI; 2005-057985/06.  
 XX  
 PT Proteases with defined specificity for a target substrate useful for  
 PT treating a specific disease related to the target substrate, such as  
 PT cancer, asthma, diabetes, inflammatory disorders and psoriasis.  
 XX  
 PS Claim 30; SEQ ID NO 122; 250pp; English.  
 XX  
 CC The invention relates to the use of a protease with defined specificity  
 CC for a target substrate for preparing a medicament for the treatment of a  
 CC specific disease related to the target substrate. The invention also  
 CC relates to a pharmaceutical or diagnostic composition comprising one or  
 CC more enzymes in the use cited, optionally comprising pharmaceutically or  
 CC diagnostically acceptable carriers, excipients and/or auxiliary agents, a  
 CC method for cleaving a target substrate in vivo or in vitro comprising  
 CC contacting the target substrate with a protease as cited in the use  
 CC mentioned, and a method for treatment of a disease in a patient connected  
 CC with a specific target substrate comprising administering to the patient  
 CC a protease with defined specificity for the specific target substrate.  
 CC The protease hydrolyzes the target substrate and eliminates or reduces  
 CC one or more biological activities, physico-chemical properties or  
 CC pharmacological properties of the target protein and/or activates or  
 CC increases one or more biological activities, physico-chemical properties  
 CC or pharmacological properties of the target protein, and/or adds one or  
 CC more biological activities, physico-chemical properties or  
 CC pharmacological properties to the target protein. The protease may be  
 CC administered to treat immune disorders, inflammatory disorders,  
 CC musculoskeletal diseases, dermatological diseases, gastrointestinal  
 CC diseases, endocrine diseases, metabolic disorder, cancers, hematological  
 CC diseases, cardiovascular diseases, neurological diseases,  
 CC neurodegenerative diseases, growth disorders, respiratory diseases,  
 CC genitourinary diseases, gynecological disorders, nutritional disorders  
 CC and infections. This sequence represents a polypeptide hydrolysed by a  
 CC protease used in the scope of the invention.  
 CC  
 XX  
 SQ Sequence 156 AA;  
 Query Match 100.0%; Score 191; DB 9; Length 156;  
 Best Local Similarity 100.0%; Pred. No. 2.5e-18;  
 Matches 34; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

RESULT 7  
 AAP60579  
 ID AAP60579 standard; protein, 180 AA.  
 AC AAP60579;  
 XX  
 XX 25-MAR-2003 (revised)  
 DT 03-OCT-2002 (revised)  
 DT 31-UTL-1991 (first entry)  
 XX  
 DE Human prepro-insulin-like growth factor-2.  
 XX  
 KM Insulin-like growth factor-2.  
 XX  
 OS Homo sapiens.  
 XX  
 XX Key Location/Qualifiers  
 FH 1..180  
 FT Protein /label= prepro-insulin-like growth factor-2  
 FT 25..67  
 FT Protein /label= mature insulin-like growth factor-2  
 XX  
 PN WO8600619-A.  
 XX  
 PD 30-JAN-1986.  
 XX  
 PF 10-UTL-1985; 85WO-US001325.  
 XX  
 PR 13-JUL-1984; 84US-00630557.  
 XX  
 PA (CHIR ) CHIRON CORP.  
 PI Bell G, Rall LB, Merryweath JP;  
 DR WPI; 1986-042104/06.  
 DR N-PSDB; AAM60491.  
 XX  
 PT Prepro insulin-like growth factors I and II - obtd. from the human  
 PT genome by e.g. screening a cDNA library obtd. from human liver cells.  
 XX  
 PS Disclosure; Fig 2; 20pp; English.  
 XX  
 CC The sequence is human prepro-insulin-like growth factor-2. DNA probes  
 CC prepared against DNA encoding the protein sequence may be used to detect the  
 CC presence of the genes in a natural source. The probes may be used to  
 CC detect mutations and/or deletions in humans suffering from growth  
 CC deficiencies. See also AAM60489, AAM60490 (updated on 03-OCT-2002 to add  
 CC missing OS field.) (Updated on 25-MAR-2003 to correct PA field.)  
 XX  
 SQ Sequence 180 AA;  
 Query Match 100.0%; Score 191; DB 1; Length 180;  
 Best Local Similarity 100.0%; Pred. No. 2.9e-18;  
 Matches 34; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 QY 1 DVSTPPTVLPDNFPRYVGKFFQYDTWKSTORL 34  
 DB 93 DVSTPPTVLPDNFPRYVGKFFQYDTWKSTORL 126  
 RESULT 8  
 AAY70364  
 ID AAY70364 standard; protein, 180 AA.  
 XX  
 XX AAY70364;  
 AC  
 DT 21-JUN-2000 (first entry)  
 XX  
 XX Insulin-like growth factor II.  
 DE  
 XX Renilla luciferase cDNA; IGF-II; insulin-like growth factor II;  
 KM Insulin-like growth factor binding protein 6; IGBP 6; GFP;



KW green fluorescent protein; molecule interaction; fluorescence.  
 XX Homo sapiens.  
 XX MO200014271-A1.  
 XX 16-MAR-2000.  
 XX 02-SEP-1999; 99MO-US020207.  
 XX 03-SEP-1998; 98US-0099068P.  
 XX 24-MAY-1999; 99US-0135835P.  
 XX (UYLO-) UNIV IOWA LINDA.  
 XX Szalay AA, Wang Y, Wang-Pruski G;  
 DR WPI; 2000-246843/21.  
 DR N-PSDB; AAZ51474.  
 XX Determining molecule, especially protein, interaction within a living  
 PT cell comprises forming complexes of molecules with a donor luciferase and  
 PT an acceptor fluorophore and detecting any resulting fluorescence.  
 PS Disclosure; Page 22-23; 30pp; English.  
 XX The present cDNA sequence is Insulin-like growth factor II. This was  
 CC selected as the second protein due to its binding affinity for IGFBP 6.  
 CC The Renilla luciferase cDNA was fused to IGFBP 6 cDNA (insulin-like  
 CC growth factor binding protein 6) and humanised GFP (green fluorescent  
 CC protein) cDNA was fused to IGF-II (insulin-like growth factor II) cDNA.  
 CC Living cells were transfected with the fused cDNAs and the fusion  
 CC proteins were expressed. This is used in determining molecule interaction  
 CC within a living cell by detecting any fluorescence resulting from  
 CC luminescence resonance energy transfer from the donor luciferase  
 CC indicating molecule interaction  
 SQ Sequence 180 AA;  
 Query Match 100.0%; Score 191; DB 3; Length 180;  
 Best Local Similarity 100.0%; Pred. No. 2.9e-18;  
 Matches 34; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 QY 1 DVSTPPTVLPDNFPRYPVGKFFQYDTWKSTORL 34  
 DB 93 DVSTPPTVLPDNFPRYPVGKFFQYDTWKSTORL 126  
 RESULT 9  
 ABG96345  
 ID ABG96345 standard; protein; 180 AA.  
 AC ABG96345;  
 XX 11-DEC-2002 (first entry)  
 DT Human ovarian cancer marker OV58.  
 DE Human ovarian cancer marker OV58.  
 XX Human; ovarian cancer; marker; cancer; familial history; brain disorder;  
 KW central nervous system disorder; bacterial meningitis; viral meningitis;  
 KW Alzheimer's disease; Parkinson's disease; cerebral oedema; hydrocephalus;  
 KW brain herniation; inflammation; encephalitis; testicular disorder;  
 KW non-tuberculous granulomatous orchitis; connective tissue disorder;  
 KW heart disorder; ischaemic heart disease; atherosclerosis; neoplasm;  
 KW histological type; carcinogenic; ovarian cancer marker.  
 XX Homo sapiens.  
 OS WO200271928-A2.  
 PN 19-SEP-2002.  
 PD 14-MAR-2002; 2002MO-US007826.  
 PF

XX 14-MAR-2001; 2001US-0276025P.  
 PR 14-MAR-2001; 2001US-0276026P.  
 PR 10-AUG-2001; 2001US-0311732P.  
 PR 19-SEP-2001; 2001US-0323580P.  
 PR 26-SEP-2001; 2001US-0324967P.  
 PR 26-SEP-2001; 2001US-0325102P.  
 PR 26-SEP-2001; 2001US-0325149P.  
 XX (MILL-) MILLENNIUM PHARM INC.  
 XX Monahan JE, Gannavarapu M, Hoersch S, Kamatkar S, Kovatis SG;  
 PI Meyers RE, Morrissey MP, Olandt PJ, Sen A, Vieby PO, Mills GB;  
 PI Bast RC, Lu K, Schmandt RE, Zhao X, Giatt K;  
 DR WPI; 2002-723277/78.  
 DR N-PSDB; ABS76441.  
 XX Assessing whether a patient is afflicted with ovarian cancer, useful in  
 PT assessing the stage or progression of the disease, comprises comparing  
 PT the expression level of a cancer marker in a sample from a patient and  
 PT from a non cancer patient.  
 XX Disclosure; Page 261; 481pp; English.  
 XX The present invention relates to a new method for assessing whether a  
 CC patient is afflicted with ovarian cancer. The method involves comparing  
 CC the expression level of a marker in a patient sample and the normal level  
 CC of expression of the marker in a control non-ovarian cancer sample, where  
 CC the marker is selected from 363 cancer markers described in the  
 CC specification. The method of the invention is useful in diagnosing or  
 CC characterising cancer, in detecting the presence of cancer as early as  
 CC possible, and the recurrence of ovarian cancer. The method may also be of  
 CC particular use with patients having an enhanced risk of developing  
 CC ovarian cancer (e.g. patients having a familial history of ovarian  
 CC cancer). The cancer markers may be used in the management and treatment  
 CC of e.g. brain and central nervous system disorders (e.g. bacterial and  
 CC viral meningitis, Alzheimer's disease or Parkinson's disease), brain  
 CC disorders (e.g. cerebral oedema, hydrocephalus or brain herniations),  
 CC inflammations (e.g. bacterial or viral meningitis or encephalitis),  
 CC testicular disorders (e.g. non-tuberculous granulomatous orchitis),  
 CC connective tissue disorders, or heart disorders (e.g. ischaemic heart  
 CC disease or atherosclerosis). The compositions and methods may also be  
 CC used in assessing the histological type of neoplasm associated with  
 CC ovarian cancer, monitoring the progression of ovarian cancer, determining  
 CC whether ovarian cancer has metastasized or is likely to metastasize,  
 CC selecting a composition for inhibiting ovarian cancer, assessing the  
 CC ovarian carcinogenic potential of a compound, or inhibiting ovarian  
 CC cancer or at risk of developing ovarian cancer. The present amino acid  
 CC sequence represents one of the ovarian cancer markers described in the  
 CC invention  
 XX SQ Sequence 180 AA;  
 Query Match 100.0%; Score 191; DB 5; Length 180;  
 Best Local Similarity 100.0%; Pred. No. 2.9e-18;  
 Matches 34; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 QY 1 DVSTPPTVLPDNFPRYPVGKFFQYDTWKSTORL 34  
 DB 93 DVSTPPTVLPDNFPRYPVGKFFQYDTWKSTORL 126  
 RESULT 10  
 ABP54951  
 ID ABP54951 standard; protein; 180 AA.  
 AC ABP54951;  
 XX 13-JAN-2003 (first entry)  
 DT Human IGF2.  
 DE Human IGF2.  
 XX

KW IGF2; tyrosine threonine kinase; TTK; colon cancer; breast cancer;  
KM tumour; cytosstatic; human; gene therapy.  
XX  
XX Homo sapiens.  
XX WO200268444-A1.  
XX  
XX 06-SEP-2002.  
XX PD  
XX PF 21-FEB-2002; 2002WO-US005278.  
XX  
XX 21-FEB-2001; 2001US-0271254P.  
XX PR  
XX (CHIR ) CHIRON CORP.  
XX PA  
XX Reinhard C, Jefferson AB, Chan VW;  
XX PI  
XX WPI; 2002-698650/75.  
XX DR N-PSDB; ABV73957.  
XX DR  
XX PT Reducing growth of cancer cells comprises reducing Tyrosine Threonine  
XX PT Kinase (TTK) activity, useful in diagnosing and treating disorders with  
XX PT abnormal expression levels and activity of TTK, such as lung, colon,  
XX PT prostate and ovarian cancer.  
XX PT  
XX PS Disclosure; Page 11; 113pp; English.  
XX  
XX The present sequence is the protein sequence of human IGF2. This is an  
XX CC example of a gene product that is differentially expressed in cancer  
XX CC cells relative to non-cancer cells, or between cancer cells of different  
XX CC malignant potential. Such genes, and their gene products, can be assayed  
XX CC in addition to tyrosine threonine kinase (TTK, see ABP54938), in methods  
XX CC of the invention for differential expression in a test cell. The  
XX CC invention is based on the finding that TTK is differentially expressed in  
XX CC various forms of cancer. Methods are provided for the identification of  
XX CC cancerous cells, especially breast cancer and colon cancer cells, by  
XX CC detection of expression levels of TTK, as well as diagnostic, prognostic  
XX CC and therapeutic methods based on differential expression. These methods  
XX CC can be used as the basis of rational therapy. Assays for identifying  
XX CC molecules that modulate the activity of these genes in cancers, as well  
XX CC as methods of inhibiting tumour growth by inhibiting the activity of TTK  
XX CC are also provided  
XX  
SQ Sequence 180 AA;  
  
Query Match 100.0%; Score 191; DB 5; Length 180;  
Best Local Similarity 100.0%; Pred. No. 2.9e-18;  
Matches 34; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
  
QY 1 DVSTPPTVLPDNFPRYPVGKFFQYDTWKOSTORL 34  
Db 93 DVSTPPTVLPDNFPRYPVGKFFQYDTWKOSTORL 126  
  
RESULT 11  
ID ABR48184 standard; protein; 180 AA.  
XX  
XX ABR48184;  
AC  
XX  
DT 12-JUN-2003 (first entry)  
XX  
DE Human bladder cancer associated protein sequence SEQ ID NO:84.  
XX  
XX Human; bladder cancer; cytosstatic; gene therapy; vaccine.  
XX KM  
XX Homo sapiens.  
XX OS  
XX WO2003003906-A2.  
XX PN  
XX 16-JAN-2003.  
XX PD  
XX 03-JUL-2002; 2002WO-US021338.  
XX PF

XX  
XX 03-JUL-2001; 2001US-0302814P.  
XX PR  
XX 03-AUG-2001; 2001US-0310099P.  
XX PR  
XX 08-NOV-2001; 2001US-0343705P.  
XX PR  
XX 13-NOV-2001; 2001US-0350666P.  
XX PR  
XX 12-APR-2002; 2002US-0372246P.  
XX  
XX (EOSB-) EOS BIOTECHNOLOGY INC.  
XX PA  
XX Mack DH, Aziz N;  
XX PI  
XX WPI; 2003-201532/19.  
XX DR  
XX N-PSDB; ACC50995.  
XX  
XX Detecting a bladder cancer-associated transcript in a cell from a  
XX PT patient, comprises contacting a biological sample from the patient with a  
XX PT bladder cancer-associated polynucleotide or antibody.  
XX  
XX Claim 10; Page 262; 307pp; English.  
XX PS  
XX  
XX The present invention describes a method for detecting a bladder cancer-  
XX CC associated transcript in a cell from a patient. The method comprises  
XX CC contacting a biological sample from the patient with a polynucleotide  
XX CC that selectively hybridises to a sequence that is 80 % identical to a  
XX CC table of sequences (see ACC50951 to ACC51059). ACC50951 to ACC51059  
XX CC encode the human bladder cancer-associated proteins given in ABR48146 to  
XX CC ABR48242). Bladder cancer-associated sequences from the present invention  
XX CC have cytosstatic activities, and can be used in antisense gene therapy and  
XX CC in vaccine production. The method can be used for detecting a bladder  
XX CC cancer-associated transcript in a cell from a patient. The method is  
XX CC useful in diagnosing or treating bladder cancer and in screening for  
XX CC compounds that modulate bladder cancer, such as hormones or antibodies.  
XX CC The nucleic acid molecules from the present invention may be used in  
XX CC various screening and diagnostic methods, and for gene therapy, vaccine  
XX CC and/or antisense/inhibition applications  
XX  
SQ Sequence 180 AA;  
  
Query Match 100.0%; Score 191; DB 6; Length 180;  
Best Local Similarity 100.0%; Pred. No. 2.9e-18;  
Matches 34; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
  
QY 1 DVSTPPTVLPDNFPRYPVGKFFQYDTWKOSTORL 34  
Db 93 DVSTPPTVLPDNFPRYPVGKFFQYDTWKOSTORL 126  
  
RESULT 12  
ID AAE33320 standard; protein; 180 AA.  
XX  
XX AAE33320;  
AC  
XX  
DT 02-APR-2003 (first entry)  
XX  
DE Human insulin-like growth factor 2 (IGF-II).  
XX  
XX Lysosome; metabolic disease; lysosomal storage disease; gene therapy;  
XX KM Gaucher's disease; Pompe's disease; Hurler's syndrome; neuroprotective;  
XX KM Niemann-Pick's disease; Schindler's disease; mucopolidiosis; cystinosis;  
XX KM Batten's disease; prosopain; infantile neuronal ceroid lipofuscinosis;  
XX KM fucosidosis; mannosidosis; antilipaeamic; insulin-like growth factor 2;  
XX KM IGF-II; human.  
XX  
XX Homo sapiens.  
XX OS  
XX Key Location/Qualifiers  
FH Peptide 1..24  
FT /label= Signal\_peptide  
FT Protein 25..180  
FT /note= "Human mature IGF-II protein"  
XX  
XX WO200287510-A2.  
XX PN

```

XX 07-NOV-2002.
PD
XX
PF 30-APR-2002; 2002MO-US013835.
XX
PR 30-APR-2001; 2001US-0287531P.
XX
PR 10-JUL-2001; 2001US-0304609P.
XX
PR 15-OCT-2001; 2001US-0329461P.
XX
PR 23-JAN-2002; 2002US-0351276P.
XX
PA (SYMB-) SYMBIONICS INC.
XX
PI Lebowitz JH, Beverley SM;
XX
DR WPI; 2003-111838/10.
XX
DR N-PSDB; AAD50920.
XX
PT New targeted therapeutic that is active in a mammalian lysosome binds an
PT extracellular domain of human cation-independent mannose-6-phosphate
PT receptor, useful for treating metabolic diseases such as lysosomal
PT storage disease.
XX
PS Example 1; Fig 1; 68pp; English.
XX
CC The invention relates to targeted therapeutic comprising a therapeutic
CC agent that is active in a mammalian lysosome, and a means for binding an
CC extracellular domain of human cation-independent mannose-6-phosphate
CC receptor in a mannose-6-phosphate independent manner. The invention is
CC useful for treating metabolic diseases such as lysosomal storage disease,
CC e.g. Gaucher's disease, Pompe's disease, Hurler's syndrome, Niemann-
CC Pick's disease, mannosidosis, fucosidosis, Schindler's disease,
CC mucopolysaccharidosis, cystinosis, Batten's disease, prosaposin, or infantile
CC neuronal ceroid lipofuscinosis. The invention is also useful in gene
CC therapy. The present sequence is human insulin-like growth factor 2 (IGF-
CC II). This sequence is used in the exemplification of the invention
XX
SQ Sequence 180 AA;
XX
Query Match 100.0%; Score 191; DB 6; Length 180;
Best Local Similarity 100.0%; Pred. No. 2,9e-18;
Matches 34; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 DVSTPPTVLPDNPFRYPVGKFFQYDTWKSTORL 34
DB 93 DVSTPPTVLPDNPFRYPVGKFFQYDTWKSTORL 126
RESULT 13
ABU61624
ID ABU61624 standard; protein; 180 AA.
XX
AC ABU61624;
XX
DT 11-AUG-2003 (first entry)
XX
DE Human insulin-like growth factor 2, IGF2.
XX
KW Human; ds; gene; tyrosine threonine kinase; TTK; cancer; cytosstatic;
KW mitotic checkpoint gene; IGF2; insulin-like growth factor.
XX
OS Homo sapiens.
XX
FN US2003045491-A1.
XX
PD 06-MAR-2003.
XX
PF 21-FEB-2002; 2002US-00081119.
XX
PR 23-FEB-2001; 2001US-0289813P.
XX
PA (REIN/) REINHARD C.
XX (JEFF/) JEFFERSON A B.
PA (CHAN/) CHAN V W.

```

```

XX Reinhard C, Jefferson AB, Chan VW;
PI WPI; 2003-456566/43.
XX
DR N-PSDB; ACA62274.
XX
PT Detecting cancer in a subject, by comparing expression levels of tyrosine
PT threonine kinase polypeptide or polynucleotide in a subject cell and a
PT normal cell, where an increase in the expression level in the test cell
PT is indicative of cancer.
XX
PS Disclosure; Page 64-65; 79pp; English.
XX
CC The invention relates to detecting cancer (other than ovarian cancer) in
CC a subject, comprising comparing the expression levels of tyrosine
CC threonine kinase (TTK, a mitotic checkpoint gene) polypeptide or
CC polynucleotide in a test cell obtained from the subject and in a normal
CC non-cancer cell, where an increase in the expression level of TTK protein
CC or nucleic acid in the test cell compared to that in the normal cell,
CC indicates the presence of cancer other than ovarian cancer. Also included
CC are reducing growth of a cancerous cell (by contacting a cancerous cell
CC with an amount of an agent effective to reduce TTK polypeptide activity
CC in the cell), an assay for identifying a candidate agent that reduces
CC growth of a cancerous cell (comprising: (i) detecting the activity of a
CC TTK polypeptide in the presence of a candidate agent; and (ii) comparing
CC the activity of TTK polypeptide in the presence of a candidate agent
CC relative to TTK polypeptide activity in the absence of the candidate
CC agent), identifying an agent that reduces TTK activity (comprising: (i)
CC contacting a cancerous cell displaying elevated expression of a TTK-
CC encoding polynucleotide with a candidate agent; and (ii) determining the
CC effect of the candidate agent on TTK polypeptide activity) and assessing
CC the prognosis of a cancerous disease other than ovarian cancer in a
CC subject (comprising: (i) detecting expression of TTK-encoding
CC polynucleotide in a test cancer cell of a subject; and (ii) comparing a
CC level of expression of TTK-encoding polynucleotide in the test cancer
CC cell with a level of expression of the polynucleotide in a control non-
CC cancer cell, where the level of expression of TTK in the test cancer cell
CC relative to the level of expression in the control non-cancer cell is
CC indicative of the prognosis of the cancerous disease). The methods are
CC useful for detecting cancer (other than ovarian cancer) in a subject,
CC reducing growth of cancerous cells, identifying a candidate agent that
CC reduces growth of a cancerous cell, identifying an agent that reduces TTK
CC activity and assessing the prognosis of a cancerous disease other than
CC ovarian cancer. The methods are also useful for determining the ability
CC of a subject to respond to a particular therapy e.g. as a basis of
CC rational therapy. The present sequence represents another protein which
CC is differentially expressed in cancer tissues, in this case human IGF2
CC (insulin-like growth factor)
XX
SQ Sequence 180 AA;
XX
Query Match 100.0%; Score 191; DB 7; Length 180;
Best Local Similarity 100.0%; Pred. No. 2,9e-18;
Matches 34; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 DVSTPPTVLPDNPFRYPVGKFFQYDTWKSTORL 34
DB 93 DVSTPPTVLPDNPFRYPVGKFFQYDTWKSTORL 126
RESULT 14
ADB80535
ID ADB80535 standard; protein; 180 AA.
XX
AC ADB80535;
XX
DT 04-DEC-2003 (first entry)
XX
DE Ovarian cancer-associated protein #50.
XX
KW cytosstatic; gene therapy; vaccine; ovarian cancer; diagnosis;
KW post-operative chemotherapy; radiation therapy; tumour prognosis;
KW pre-cancerous lesion detection.

```

XX Homo sapiens.  
OS  
XX WO2002102235-A2.  
PN  
XX 27-DEC-2002.  
PD  
XX 18-JUN-2002; 2002WO-US019297.  
PF  
XX 18-JUN-2001; 2001US-0299234P.  
PR  
XX 27-AUG-2001; 2001US-0315287P.  
PR  
XX 05-SEP-2001; 2001US-0317544P.  
PR  
XX 13-NOV-2001; 2001US-0350666P.  
PR  
XX 12-APR-2002; 2002US-0372246P.  
XX  
XX (EOSB-) EOS BIOTECHNOLOGY INC.  
PA  
XX Mack DH, Gish KC;  
PI  
XX WPI; 2003-167431/16.  
DR  
XX N-PSDB; ADB80534.  
XX  
XX Detecting an ovarian cancer-associated transcript in a cell from a  
PT patient comprises contacting a biological sample from the patient with a  
PT polynucleotide that hybridizes to an ovarian cancer gene.  
XX  
XX Claim 13; Page 309; 332pp; English.  
XX  
XX The invention relates to a method of detecting an ovarian cancer-  
CC associated transcript in a cell from a patient, by contacting a  
CC biological sample from the patient with a polynucleotide that selectively  
CC hybridizes to a sequence at least 80% identical to any of one of 80  
CC nucleic acid sequences given in the specification. The method is useful  
CC in diagnosing ovarian cancer and in identifying and using agents and/or  
CC targets that inhibit ovarian cancer. The nucleic acid molecule,  
CC polypeptide and the antibody may also be used in detecting ovarian  
CC cancers, monitoring and early detection or relapse following treatment,  
CC monitoring response to therapy, selecting patients for post-operative  
CC chemotherapy or radiation therapy, in selecting pre-cancerous lesions,  
CC chemotherapeutic tumour prognosis, early detection of pre-cancerous lesions,  
CC and as vaccines. This sequence corresponds to one of the proteins used  
CC for the detection method of the invention.  
XX  
XX Sequence 180 AA;  
SQ  
Query Match 100.0%; Score 191; DB 7; Length 180;  
Best Local Similarity 100.0%; Pred. No. 2.9e-18;  
Matches 34; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 DVSTPPTVLPDNFPRYPVGKFFQYDTWKSTORL 34  
DB 93 DVSTPPTVLPDNFPRYPVGKFFQYDTWKSTORL 126  
RESULT 15  
ADD46367 standard; protein; 180 AA.  
XX  
XX ADD46367;  
AC  
XX  
XX 29-JUN-2004 (first entry)  
DT  
XX  
XX Human Protein P01344, SEQ ID NO 12047.  
DE  
XX  
XX Human; pain; neuronal tissue; gene therapy;  
KW spinal segmental nerve injury; chronic constriction injury; CCI;  
KW spared nerve injury; SN1; Chung.  
XX  
XX Homo sapiens.  
OS  
XX WO2003016475-A2.  
PN  
XX 27-FEB-2003.  
PD

XX 14-AUG-2002; 2002WO-US025765.  
PF  
XX 14-AUG-2001; 2001US-0312147P.  
PR  
XX 01-NOV-2001; 2001US-0346382P.  
PR  
XX 26-NOV-2001; 2001US-0333347P.  
XX  
XX (GENO) GEN HOSPITAL CORP.  
PA  
XX (FARB) BAYER AG.  
PA  
XX Woolf C, D'urso D, Befort K, Costigan M;  
PI  
XX WPI; 2003-268312/26.  
DR  
XX GENBANK; P01344.  
DR  
XX  
XX New composition comprising two or more isolated polypeptides, useful for  
PT preparing a medicament for treating pain in an animal.  
PT  
XX  
XX Claim 1; Page; 1017pp; English.  
XX  
XX The invention discloses a composition comprising two or more isolated rat  
CC or human polynucleotides or a polynucleotide which represents a fragment,  
CC derivative or allelic variation of the nucleic acid sequence. Also  
CC claimed are a vector comprising the novel polynucleotide, a host cell  
CC comprising the vector, a method for identifying a nucleotide sequence  
CC which is differentially regulated in an animal subjected to pain and a  
CC kit to perform the method, an array, a method for identifying an agent  
CC that increases or decreases the expression of the polynucleotide sequence  
CC that is differentially expressed in neuronal tissue of a first animal  
CC subjected to pain, a method for identifying a compound which regulates  
CC the expression of a polynucleotide sequence which is differentially  
CC expressed in an animal subjected to pain, a method for identifying a  
CC compound that regulates the activity of one or more of the  
CC polynucleotides, a method for producing a pharmaceutical composition, a  
CC method for identifying a compound or small molecule that regulates the  
CC activity in an animal of one or more of the polypeptides given in the  
CC specification, a method for identifying a compound useful in treating  
CC pain and a pharmaceutical composition comprising the one or more  
CC polypeptides or their antibodies. The polynucleotide or the compound that  
CC modulates its activity is useful for preparing a medicament for treating  
CC pain (e.g. spinal segmental nerve injury (Chung), chronic constriction  
CC injury (CCI) and spared nerve injury (SN1)) in an animal (e.g. gene  
CC therapy). The sequence presented is a human protein (shown in Table 2 of  
CC the specification) which is differentially expressed during pain. Note:  
CC The sequence data for this patent did not form part of the printed  
CC specification, but was obtained in electronic form directly from WIPRO at  
CC ftp.wipro.int/pub/published\_pct\_sequences.  
XX  
XX Sequence 180 AA;  
SQ  
Query Match 100.0%; Score 191; DB 7; Length 180;  
Best Local Similarity 100.0%; Pred. No. 2.9e-18;  
Matches 34; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 DVSTPPTVLPDNFPRYPVGKFFQYDTWKSTORL 34  
DB 93 DVSTPPTVLPDNFPRYPVGKFFQYDTWKSTORL 126  
Search completed: May 21, 2006, 12:37:32  
Job time : 120.333 secs

GenCore version 5.1.8  
Copyright (c) 1993 - 2006 Bioceleration Ltd.

OM protein - protein search, using sw model

Run on: May 21, 2006, 12:37:56 ; Search time 19.6667 Seconds  
(without alignments)  
166.341 Million cell updates/sec

Title: US-10-632-366-1

Perfect score: 191  
Sequence: 1 DVSTPPTVLPDNFPRYPVGKFRQYDWKQSTQRL 34

Scoring table: BLOSUM62  
Gapop 10.0 , Gapext 0.5

Searched: 283416 seqs, 96216763 residues

Total number of hits satisfying chosen parameters: 283416

Minimum DB seq length: 0  
Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%  
Maximum Match 100%  
Listing first 45 summaries

Database : PIR 80:\*\*

1: pir1:\*\*  
2: pir2:\*\*  
3: pir3:\*\*  
4: pir4:\*\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

Result No.	Score	Query Match	length	DB ID	Description
1	191	100.0	180	1	IGHU2
2	191	100.0	183	2	I67610
3	191	100.0	183	2	S02423
4	182	95.3	181	2	B60738
5	160	83.8	128	2	I57671
6	150	78.5	180	2	A24913
7	142	74.3	179	2	S04858
8	142	74.3	180	1	IGRT2
9	138	72.3	155	1	IGBO2
10	115	60.2	93	2	I53642
11	58	30.4	380	2	S16891
12	55	28.8	627	2	G81719
13	54	28.3	216	2	C84900
14	52.5	27.5	418	2	B72565
15	52	27.2	263	2	AB2789
16	52	27.2	268	2	C97568
17	52	27.2	270	2	G64603
18	52	27.2	270	2	G71809
19	52	27.2	270	2	G71809
20	52	27.2	483	2	S25606
21	51.5	27.0	751	1	T48060
22	51	26.7	404	1	TVVPTH
23	51	26.7	1896	2	T08851
24	50	26.2	350	2	H86516
25	50	26.2	550	2	A72106
26	50	26.2	681	2	T51924
27	50	26.2	962	2	T32574
28	49.5	25.9	463	1	P2W13

30	49.5	25.9	869	2	A95156	conserved hypothet
31	49.5	25.9	878	2	D98022	conserved hypothet
32	49	25.7	108	2	T17599	hypothetical prote
33	49	25.7	177	2	B89907	thymonuclease [lm
34	49	25.7	199	2	AH3320	hypothetical prote
35	49	25.7	329	2	T10064	cytokinin-induced
36	49	25.7	1013	2	T33470	hypothetical prote
37	49	25.7	1034	2	A24925	beta-galactosidase
38	49	25.7	1598	2	T13800	coracle gene prote
39	48.5	25.4	100	2	C72667	hypothetical prote
40	48.5	25.4	474	2	G84543	probable protein k
41	48.5	25.4	957	2	T03829	transcription fact
42	48.5	25.4	978	2	T03763	BAP-135 protein ho
43	48.5	25.4	998	2	T09492	general transcript
44	48.5	25.4	1230	2	S53974	hypothetical prote
45	48.5	25.4	1874	1	J00533	genome polypeptid

## ALIGNMENTS

RESULT 1  
IGHU2  
insulin-like growth factor II precursor [validated] - human  
N:Alternate names: somatomedin A  
C:Species: Homo sapiens (man)  
C:Date: 24-Apr-1984 #sequence revision 15-Nov-1984 #text change 09-Jul-2004  
C:Accession: B23614; A93339; A28300; A30155; I56957; A93338; A91448; B60483; A33845; A61  
R:de Pagter-Holthuisen, P.; van Schaik, F.M.A.; Verdulijn, G.M.; van Ommen, G.J.B.; Boum-  
FERS Lett. 195, 179-184, 1986  
A:Title: Organization of the human genes for insulin-like growth factors I and II.  
A:Reference number: A91356; MUID:86108862; PMID:3002851  
A:Accession: B23614  
A:Molecule type: DNA  
A:Residues: 1-180 <DEP>  
A:Cross-references: UNIPROT:P01344; UNIPARC:UP10000000965  
R:Dull, T.J.; Gray, A.; Hayflick, J.S.; Ullrich, A.  
Nature 310, 777-781, 1984  
A:Title: Insulin-like growth factor II precursor gene organization in relation to insulin  
A:Reference number: A93339; MUID:84295593; PMID:6382022  
A:Accession: A93339  
A:Molecule type: DNA  
A:Residues: 1-180 <DUL>  
A:Cross-references: UNIPARC:UP10000000965; GB:M1418; NID:G183094; PIDN:AAA52535.1; PID  
R:Triminger, J.C.; Rosen, K.M.; Humbel, R.E.; Villa-Komaroff, L.  
Proc. Natl. Acad. Sci. U.S.A. 84, 6330-6334, 1987  
A:Title: Tissue-specific expression of insulin-like growth factor II mRNAs with distinct  
A:Reference number: A28300; MUID:87317645; PMID:3476948  
A:Accession: A28300  
A:Molecule type: mRNA  
A:Residues: 1-180 <IRM>  
A:Cross-references: UNIPARC:UP10000000965; GB:M17426; NID:G189954; PIDN:AAA60088.1; PID  
R:Shen, S.J.; Daimon, M.; Wang, C.Y.; Jansen, M.; Ilan, J.  
Proc. Natl. Acad. Sci. U.S.A. 85, 1947-1951, 1988  
A:Title: Isolation of an insulin-like growth factor II cDNA with a unique 5' untranslated  
A:Reference number: A30155; MUID:88158110; PMID:2450353  
A:Accession: A30155  
A:Molecule type: mRNA  
A:Residues: 1-180 <RHE>  
A:Cross-references: UNIPARC:UP10000000965; GB:J03242; NID:G183123; PIDN:AAA52545.1; PID  
R:Hagihara, K.; Kobayashi, T.; Tobita, M.; Kikyo, N.; Yazaki, Y.; Okabe, T.  
Upn. J. Cancer Res. 86, 202-207, 1995  
A:Title: Isolation of a cDNA for a growth factor of vascular endothelial cells from huma  
A:Reference number: I56957; MUID:95247546; PMID:7730145  
A:Accession: I56957  
A>Status: translated from GB/EMBL/DBJ  
A:Molecule type: mRNA  
A:Residues: 1-180 <HAG>  
A:Cross-references: UNIPARC:UP10000000965; GB:S77035; NID:G914191; PIDN:AAA34155.1; PID  
A:Experimental source: Lung cancer cell line T3M-11  
R:Beil, G.I.; Merlyweather, J.P.; Sanchez-Pescador, R.; Stempien, M.M.; Priestley, L.; S  
Nature 310, 775-777, 1984  
A:Title: Sequence of a cDNA clone encoding human preproinsulin-like growth factor II.

A:Reference number: A93338; MUID:84295592; PMID:6382021  
 A:Accession: A93338  
 A:Molecule type: mRNA  
 A:Residues: 1-180 <BEL>  
 A:Cross-references: UNIPARC:UPI0000000965; GB:X00910; GB:M17862; NID:G32995; PIDN:CAA254  
 R:Rinderknecht, E.; Humbel, R.E.  
 FEBS Lett. 89, 283-286, 1978  
 A:Title: Primary structure of human insulin-like growth factor II.  
 A:Reference number: A91448; MUID:78191259; PMID:658418  
 A:Accession: A91448  
 A:Molecule type: protein  
 A:Residues: 25-91 <RIN>  
 A:Cross-references: UNIPARC:UPI000002CB81  
 R:Karey, K.P.; Marguaret, H.; Sirdaeku, D.A.  
 Blood 74, 1084-1092, 1989  
 A:Title: Human platelet-derived mitogene. Identification of insulinlike growth factors I  
 A:Reference number: A60483; MUID:89333462; PMID:2752153  
 A:Accession: B60483  
 A:Molecule type: protein  
 A:Residues: 25-32, X', 34-44 <KAR>  
 A:Cross-references: UNIPARC:UPI000017358A  
 A:Experimental source: platelet lysate  
 R:Smith, M.C.; Cook, J.A.; Furman, T.C.; Occolowicz, J.L.  
 J. Biol. Chem. 264, 9314-9321, 1989  
 A:Title: Structure and activity dependence of recombinant human insulin-like growth fact  
 A:Reference number: A33845; MUID:89255428; PMID:2722856  
 A:Accession: A33845  
 A:Molecule type: protein  
 A:Residues: 25-91 <SMI>  
 A:Cross-references: UNIPARC:UPI000002CB81  
 R:Mohan, S.  
 Growth Factors 2, 267-271, 1990  
 A:Title: A simple and efficient scheme for the purification of insulin-like growth facto  
 A:Reference number: A61037; MUID:90248152; PMID:2337472  
 A:Accession: A61037  
 A:Molecule type: protein  
 A:Residues: 25-32 <MOH>  
 A:Cross-references: UNIPARC:UPI000017358B  
 A:Note: this protein was purified from D9ne, where it comprises 0.1 % of total protein  
 R:Janssen, M.; van Schaik, F.M.; van Tol, H.; van den Brande, J.L.; Sussenbach, J.S.  
 FEBS Lett. 179, 243-246, 1985  
 A:Title: Nucleotide sequences of cDNAs encoding precursors of human insulin-like growth  
 A:Reference number: 153458; MUID:85102019; PMID:3881277  
 A:Accession: 153458  
 A:Status: translated from GB/EMBL/DBJ  
 A:Molecule type: mRNA  
 A:Residues: 1-180 <RES>  
 A:Cross-references: UNIPARC:UPI0000000965; GB:M17862; NID:G32995; PIDN:CAA25426.1; PID:G  
 A:Note: an alternatively spliced form was also found, in which 53-ser is replaced by Arg  
 R:Ball, L.B.; Scott, J.; Bell, G.I.  
 Meth. Enzymol. 146, 239-248, 1987  
 A:Title: Human insulin-like growth factor I and II messenger RNA: isolation of complemen  
 A:Reference number: 157044; MUID:88065102; PMID:3683205  
 A:Accession: 176705  
 A:Status: preliminary; translated from GB/EMBL/DBJ  
 A:Molecule type: mRNA  
 A:Residues: 1-2, W', 4-180 <RES>  
 A:Cross-references: UNIPARC:UPI000016A990; GB:M29645; NID:G183121; PIDN:AAA52544.1; PID:  
 R:Gray, A.; Tam, A.W.; Dull, T.J.; Hayflick, J.; Pintar, J.; Cavenee, W.K.; Koulos, A.;  
 DNA 6, 283-295, 1987  
 A:Title: Tissue-specific and developmentally regulated transcription of the insulin-like  
 A:Reference number: 152978; MUID:88003966; PMID:3652904  
 A:Accession: 152978  
 A:Status: translated from GB/EMBL/DBJ  
 A:Molecule type: DNA  
 A:Residues: 1-52 <RE2>  
 A:Cross-references: UNIPARC:UPI000016A98E; GB:M22373; NID:G183100; PIDN:AAA52536.1; PID:  
 C:Genetics:  
 A:Gene: GDB:IGF2  
 A:Cross-references: GDB:119331; OMIM:147470  
 A:Map position: 11p15.5-11p15.5  
 C:Superfamily: insulin  
 C:Keywords: alternative splicing; angiogenesis; growth factor; monomer

F:1-24/Domain: signal sequence #status predicted <SIG>  
 F:25-91/Product: insulin-like growth factor II #status experimental <MAT>  
 F:92-180/Domain: carboxyl-terminal propeptide (E peptide) #status predicted <CTP>  
 F:13-71, 45-84, 70-75/Disulfide bonds: #status experimental  
 Query Match 100.0%; Score 191; DB 1; Length 180;  
 Best local Similarity 100.0%; Pred. No. 4e-19;  
 Matches 34; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 QY 1 DVSTPPTVLDPNPPRYPVGKFFQYDTWKSTORL 34  
 |||  
 DB 93 DVSTPPTVLDPNPPRYPVGKFFQYDTWKSTORL 126  
 |||  
 RESULT 2  
 167610  
 insulin-like growth factor II, domains A-E - human  
 C:Species: Homo sapiens (man)  
 C:Date: 04-Oct-1996 #sequence\_revision 04-Oct-1996 #text\_change 16-Jul-1999  
 C:Accession: 167610  
 R:Janssen, M.; van Schaik, F.M.; van Tol, H.; Van den Brande, J.L.; Sussenbach, J.S.  
 FEBS Lett. 179, 243-246, 1985  
 A:Title: Nucleotide sequences of cDNAs encoding precursors of human insulin-like growth  
 A:Reference number: 153458; MUID:85102019; PMID:3881277  
 A:Accession: 167610  
 A:Status: preliminary; translated from GB/EMBL/DBJ  
 A:Molecule type: mRNA  
 A:Residues: 1-183 <RES>  
 A:Cross-references: UNIPARC:UPI000016A8E9; GB:M17863; NID:G182527; PIDN:AAA52443.1; PID:  
 C:Genetics:  
 A:Gene: GDB:IGF2  
 A:Cross-references: GDB:119331; OMIM:147470  
 A:Map position: 11p15.5-11p15.5  
 C:Superfamily: insulin  
 Query Match 100.0%; Score 191; DB 2; Length 183;  
 Best local Similarity 100.0%; Pred. No. 4.1e-19;  
 Matches 34; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 QY 1 DVSTPPTVLDPNPPRYPVGKFFQYDTWKSTORL 34  
 |||  
 DB 96 DVSTPPTVLDPNPPRYPVGKFFQYDTWKSTORL 129  
 |||  
 RESULT 3  
 S02423  
 insulin-like growth factor II precursor, splice form II - human  
 N:Alternate names: somatomedin A  
 C:Species: Homo sapiens (man)  
 C:Date: 28-Feb-1990 #sequence\_revision 28-Feb-1990 #text\_change 09-Jul-2004  
 C:Accession: S02423; S03383; A34439  
 R:Le Bouc, Y.; Noguez, P.; Sondermeijer, P.; Dreyer, D.; Girard, F.; Binoux, M.  
 FEBS Lett. 222, 181-185, 1987  
 A:Title: A new 5'-non-coding region for human placental insulin-like growth factor II mR  
 A:Reference number: S02423; MUID:88005137; PMID:3653397  
 A:Accession: S02423  
 A:Status: not compared with conceptual translation  
 A:Molecule type: mRNA  
 A:Residues: 1-183 <RE1>  
 A:Cross-references: UNIPROT:P01344; UNIPARC:UPI000002ABR8; EMBL:Y00693  
 A:Note: 53-Ser was also found instead of residues 53-56 (Arg-Leu-Pro-Gly)  
 R:de Pagter-Holhuizen, P.; Jansen, M.; van der Kammen, R.A.; van Schaik, F.M.A.; Suser  
 Biochim. Biophys. Acta 950, 282-295, 1988  
 A:Title: Differential expression of the human insulin-like growth factor II gene. Charac  
 A:Reference number: S03383; MUID:89000779; PMID:3167054  
 A:Accession: S03383  
 A:Status: translation not shown  
 A:Molecule type: DNA  
 A:Residues: 106-183 <DEP>  
 A:Cross-references: UNIPARC:UPI000016AAE7; EMBL:X07868; NID:G32996; PIDN:CAA30717.1; PIL  
 R:Hampton, B.; Burgess, W.H.; Marshak, D.R.; Cullen, K.J.; Perdue, J.F.  
 J. Biol. Chem. 264, 19155-19160, 1989  
 A:Title: Purification and characterization of an insulin-like growth factor II variant }

```
A:Reference number: A34439; MUID:50037048; PMID:2553732
A:Accession: A34439
A:Molecule type: protein
A:Residues: 25-32,'X','34-44','X',46-59 <HAM>
A:Cross-references: UNIPARC:UPI0000176678
C:Genetics:
A:Gene: GDB:IGF2
A:Cross-references: GDB:119331; OMIM:147470
A:Map position: 11p15.5-11p15.5
C:Superfamily: insulin
C:Keywords: growth factor
F:1-24/Domain: signal sequence #status predicted <SIG>
F:25-94/Product: insulin-like growth factor II #status predicted <MNT>
F:60-67/Domain: insulin chain B-like #status experimental <DOB>
F:68-86/Domain: insulin connecting C peptide-like #status predicted <CEP>
F:89-94/Domain: D peptide #status predicted <DOB>
F:95-183/Domain: carboxyl-terminal propeptide (B peptide) #status predicted <CTP>
F:33-74,45-87,73-78/Disulfide bonds: #status predicted

Query Match
Best Local Similarity 100.0%; Score 191; DB 2; Length 183;
Matches 34; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 DVSTPPTVLPDNPFRYPVGKFFQYDTWKOSTORL 34
Db 96 DVSTPPTVLPDNPFRYPVGKFFQYDTWKOSTORL 129

RESULT 4
B60738
Insulin-like growth factor II precursor - pig
C:Species: Sus scrofa domestica (domestic pig)
C>Date: 28-Apr-1993 #sequence_revision 30-Sep-1993 #text_change 13-Nov-1998
C:Accession: S12614; B60738
R:Catchpole, I.R.; Engstrom, W.
Nucleic Acids Res. 18, 6430, 1990
A:Title: Nucleotide sequence of a porcine insulin-like growth factor II cDNA.
A:Reference number: S12614; MUID:91057136; PMID:243790
A:Accession: S12614
A:Molecule type: mRNA
A:Residues: 1-181 <CAT>
A:Cross-references: UNIPARC:UPI0000176673
R:Francis, G.L.; Owens, P.C.; McNeil, K.A.; Wallace, J.C.; Ballard, F.J.
J. Endocrinol. 122, 681-687, 1989
A:Title: Purification, amino acid sequences and assay cross-reactivities of porcine insulin-like growth factor II.
A:Reference number: A60738; MUID:90039035; PMID:2809477
A:Accession: B60738
A:Molecule type: protein
A:Residues: 25-79,'X','81-91 <PPA>
A:Cross-references: UNIPARC:UPI0000176674
C:Superfamily: insulin
F:1-24/Domain: signal sequence #status predicted <SIG>
F:25-91/Product: insulin-like growth factor II #status experimental <MNT>
F:92-181/Domain: carboxyl-terminal propeptide (B peptide) #status predicted <CTP>
F:33-71,45-84,70-75/Disulfide bonds: #status predicted

Query Match
Best Local Similarity 95.3%; Score 182; DB 2; Length 181;
Matches 32; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 1 DVSTPPTVLPDNPFRYPVGKFFQYDTWKOSTORL 34
Db 93 DVSTPPTVLPDNPFRYPVGKFFQYDTWKOSTORL 126

RESULT 5
I57671
Insulin-like growth factor II - guinea pig
C:Species: Cavia porcellus (guinea pig)
C>Date: 02-Aug-1996 #sequence_revision 02-Aug-1996 #text_change 09-Jul-2004
C:Accession: I57671
R:Levinovitz, A.; Norstedt, G.; van den Berg, S.; Robinson, I.C.; Ekstrom, T.J.
```

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Mol. Cell. Endocrinol. 89, 105-110, 1992
A:Title: Isolation of an insulin-like growth factor II cDNA from guinea pig liver: expr
A:Reference number: I57671; MUID:93246007; PMID:1301379
A:Accession: I57671
A:Status: preliminary; translated from GB/EMBL/DBJ
A:Molecule type: mRNA
A:Residues: 1-128 <RES>
A:Cross-references: UNIPROT:Q08279; UNIPARC:UPI000012D408; GB:S59899; NID:9300070; PIDN
C:Superfamily: insulin

Query Match
Best Local Similarity 83.8%; Score 160; DB 2; Length 128;
Matches 29; Conservative 1; Mismatches 4; Indels 0; Gaps 0;

QY 1 DVSTPPTVLPDNPFRYPVGKFFQYDTWKOSTORL 34
Db 93 DVSTPPTVLPDNPFRYPVGKFFQYDTWKOSTORL 126

RESULT 6
A24913
Insulin-like growth factor II precursor - mouse
C:Species: Mus musculus (house mouse)
C>Date: 07-Mar-1988 #sequence_revision 07-Mar-1988 #text_change 09-Jul-2004
C:Accession: A24913; S35874; I48463; I48464; I59137; S35875
R:Stempien, M.M.; Fong, N.M.; Rall, L.B.; Bell, G.I.
DNA 5, 357-361, 1986
A:Title: Sequence of a placental cDNA encoding the mouse insulin-like growth factor II
A:Reference number: A24913; MUID:87053171; PMID:3780370
A:Accession: A24913
A:Molecule type: mRNA
A:Residues: 1-180 <STE>
A:Cross-references: UNIPROT:P09535; UNIPARC:UPI0000020A45; GB:M14951; GB:J04069; GB:M20
A:Accession: S35874
A:Status: preliminary
A:Molecule type: DNA
A:Residues: 1-52 <RES>
A:Cross-references: UNIPARC:UPI000011613C; EMBL:X71921; NID:9393422; PIDN:CAA50737.1; P
A:Accession: I48463
A:Status: preliminary; translated from GB/EMBL/DBJ
A:Molecule type: DNA
A:Residues: 1-52 <RES>
A:Cross-references: UNIPARC:UPI000011613C; EMBL:X71921; NID:9393422; PIDN:CAA50737.1; P
A:Accession: I48464
A:Status: preliminary; translated from GB/EMBL/DBJ
A:Molecule type: DNA
A:Residues: 103-180 <RE3>
A:Cross-references: UNIPARC:UPI000011613D; EMBL:X71922; NID:9393424; PIDN:CAA50738.1; P
R:Tollefsen, S.E.; Sadow, J.L.; Rotwein, P.
Proc. Natl. Acad. Sci. U.S.A. 86, 1543-1547, 1989
A:Title: Coordinate expression of insulin-like growth factor II and its receptor during
A:Reference number: I59137; MUID:89160812; PMID:2537977
A:Accession: I59137
A:Status: preliminary; translated from GB/EMBL/DBJ
A:Molecule type: DNA
A:Residues: 1-52 <RE2>
A:Cross-references: UNIPARC:UPI000011613C; GB:M24633; NID:9341211; PIDN:AAA37923.1; PID
C:Keywords: growth factor

Query Match
Best Local Similarity 78.5%; Score 150; DB 2; Length 180;
Matches 27; Conservative 2; Mismatches 5; Indels 0; Gaps 0;

QY 1 DVSTPPTVLPDNPFRYPVGKFFQYDTWKOSTORL 34
Db 93 DVSTPPTVLPDNPFRYPVGKFFQYDTWKOSTORL 126
```

RESULT 7

S04858

Insulin-like growth factor II precursor - sheep

C.Species: Ovis orientalis aries, Ovis ammon aries (domestic sheep)

C.Date: 07-Jun-1990 #sequence, revision 07-Jun-1990 #text change 03-Jul-2004

C.Accession: S04858; S10984; S20731; S04972; S32557; S32558; A61008; S08567

R.O'Mahoney, J.V.; Adams, T.E.

Nucleic Acid Res. 17, 5392, 1989

A.Title: Nucleotide sequence of an ovine insulin-like growth factor-II cDNA.

A.Reference number: S04858; MUID:89345107; PMID:2762134

A.Accession: S04858

A.Molecule type: mRNA

A.Residues: 1-179 <OMA>

A.Cross-references: UNIPROT:P10764; UNIPARC:UP1000012D40F; EMBL:X15248; NID:g1802; PIDN:R.Brown, W.M.; Dziegielewska, K.M.; Foreman, R.C.; Saunders, N.R.

Nucleic Acid Res. 18, 4614, 1990

A.Title: The nucleotide and deduced amino acid sequences of insulin-like growth factor I

A.Reference number: S10983; MUID:90356421; PMID:2388846

A.Accession: S10984

A.Molecule type: mRNA

A.Residues: 1-179 <BRO>

A.Cross-references: UNIPARC:UP1000012D40F; EMBL:X53554; NID:g1262; PIDN:CAA37621.1; PID:R.Ohlsen, S.M.; Wong, B.A.

submitted to the EMBL Data Library, September 1990

A.Reference number: S20731

A.Accession: S20731

A.Status: preliminary

A.Molecule type: mRNA

A.Residues: 1-179 <OHL>

A.Cross-references: UNIPARC:UP1000012D40F; EMBL:X55638; NID:g1266; PIDN:CAA39163.1; PID:R.Hey, A.W.; Browne, C.A.; Simpson, R.J.; Thorburn, G.D.

Biochim. Biophys. Acta 997, 27-35, 1989

A>Title: Simultaneous isolation of insulin-like growth factors I and II from adult sheep

A.Reference number: S04972; MUID:89323215; PMID:2752053

A.Accession: S04972

A.Molecule type: protein

A.Residues: 25-58 <HEX>

A.Cross-references: UNIPARC:UP10000176675

R.Diemer, J.; Hill, D.F.; Petersen, G.B.

Biochim. Biophys. Acta 1173, 79-80, 1993

A>Title: Characterization of two sheep insulin-like growth factor II cDNAs with different

A.Reference number: S32557; MUID:93250051; PMID:8485157

A.Accession: S32557

A.Status: preliminary; nucleic acid sequence not shown; translation not shown

A.Molecule type: mRNA

A.Residues: 1-179 <DEM>

A.Cross-references: UNIPARC:UP1000012D40F; EMBL:M89788; NID:g165940; PIDN:AAA31548.1; PID:J.Straczek, J.; Heulin, M.H.; Chemut, A.M.; Belleville, F.; Nabec, P.; Denoroy, L.; Bard

J. Chromatogr. 533, 35-46, 1990

A.Title: Application of preparative high-performance liquid chromatography to the purified

artefacts.

A.Reference number: A61008; MUID:91185520; PMID:2081780

A.Accession: A61008

A.Molecule type: protein

A.Residues: 25-33; 'X', 34-44; 'X', 46-55; 'X', 57; 'X', 59-60 <STR>

A.Cross-references: UNIPARC:UP10000176676

A.Experimental source: fetal serum

R.Francini, G.L.; McNeill, K.A.; Wallace, J.C.; Ballard, F.J.; Owens, P.C.

Endocrinology 124, 1173-1183, 1989

A>Title: Sheep insulin-like growth factors I and II: sequences, activities and assays.

A.Reference number: S07198; MUID:89136887; PMID:2537174

A.Accession: S08567

A.Molecule type: protein

A.Residues: 25-45; 'DG', 48-91 <FRA>

A:Cross-references: UNIPARC:UPI0000176677  
A:Experimental source: fetal serum  
C:Superfamily: insulin  
C:Keywords: growth factor; plasma  
C:1-24/Domains: signal sequence #status predicted <SIG>  
P:25-91/Product: insulin-like growth factor II #status experimental <MAT>  
F:25-52/Domains: insulin chain B-like #status predicted <DOB>  
F:53-64/Domains: insulin connecting peptide-like #status predicted <CHC>  
F:65-85/Domains: insulin chain A-like #status predicted <DOA>  
F:86-91/Domains: D peptide #status predicted <CD>  
F:92-179/Domains: carboxyl-terminal propeptide (E peptide) #status predicted <CPR>  
F:33-71,45-84,70-75/Disulfide bonds: #status predicted

Query Match      74.3%    Score 142; DB 2; Length 179;  
Best Local Similarity    79.4%;    Pred. No. 2.6e-12;  
Matches    27; Conservative    1; Mismatches    6; Indels    0; Gaps    0;

Oy                 1 DVSTPTVLDPNFPYVGKFFQYDTWKOSTQL 34  
                 ||| ||||| : | ||||| ||||| |||||  
Db                 93 DVSASTVLPDDFTAVPVGKFPSDITWKOSTQL 126

RESULT 8  
IGRT2  
Insulin-like growth factor II precursor - rat  
N:Alternate names: IGF-II: multiplicative stimulating polypeptide  
C:Species: Rattus norvegicus (Norway rat)  
C:Cdate: 18-Dec-1981 #sequence revision 04-Dec-1986 #text change 09-Jul-2004  
C:Accession: A25350; A25598; A93554; A93229; A92505; I60178; I58058; I52428; I57695; I52  
J.Frunzio, R.; Chiaricetti, L.; Brown, A.L.; Graham, D.E.; Rechler, M.M.; Bruni, C.B.  
R.J Biol. Chem. 261, 17338-17149, 1986  
A>Title: Structure and expression of the rat insulin-like growth factor II (IGF-II) gen  
A:Reference number: A25350; PMID:87057436; PMID:3023363  
A:Accession: A25350  
A:Molecule type: DNA  
A:Residues: 1-180 <FRU>  
A:Cross-references: UNIPROT:P01346; UNIPARC:UPI000012D40E; GB:M13871; GB:J02637; NID:920  
R.Soaes, M.B.; Tuxen, A.; Ishii, D.; Mills, L.; Epikopou, V.; Cotter, S.; Zeitlin, S  
J. Mol. Biol. 192, 737-752, 1986  
A>Title: Rat insulin-like growth factor II gene. A single gene with two promoters expres  
A:Reference number: A25598; PMID:87226166; PMID:2438416  
A:Accession: A25598  
A:Molecule type: DNA  
A:Residues: 1-180 <SOA>  
A:Cross-references: UNIPARC:UPI000012D40E; GB:X02213; NID:G56428; PIDN:CAA26136.1; PID:g  
R.Bento Soares, M.; Ishii, D.N.; Estratiadis, A.  
Nucleic Acids Res. 13, 1119-1134, 1985  
A>Title: Developmental and tissue-specific expression of a family of transcripts relat  
A:Reference number: A93554; PMID:85215534; PMID:3889836  
A:Accession: A93554  
A:Molecule type: mRNA  
A:Residues: 1-180 <BEN>  
A:Cross-references: UNIPARC:UPI000012D40E; GB:X02213; NID:G56428; PIDN:CAA26136.1; PID:g  
R.Marquardt, H.; Todaro, G.J.; Henderson, L.E.; Oroszlan, S.  
J. Biol. Chem. 256, 6859-6865, 1981  
A>Title: Purification and primary structure of a polypeptide with multiplication-stimula  
A:Reference number: A92329; PMID:81215670; PMID:7018679  
A:Accession: A92329  
A:Molecule type: protein  
A:Residues: 25-56, 'G', 58-91 <MAR>  
A:Cross-references: UNIPARC:UPI0000141BCA  
R.Hylla, V.W.; Teplov, D.B.; Kent, S.B.H.; Straus, D.S.  
J. Biol. Chem. 260, 14417-14420, 1985  
A>Title: Identification of a peptide fragment from the carboxyl-terminal extension regi  
A:Reference number: A92505; PMID:86033940; PMID:4055782  
A:Accession: A92505  
A:Molecule type: protein  
A:Residues: 92-180 <HYL>  
A:Cross-references: UNIPARC:UPI00001735BF  
R.Ueno, T.; Takahashi, K.; Matsuguchi, T.; Endo, H.; Yamamoto, M.  
Biochim. Biophys. Acta 950, 411-419, 1988  
A>Title: Transcriptional deviation of the rat insulin-like growth factor II gene initia  
A:Reference number: I60178; PMID:89000793; PMID:3167060



A:Accession: I60178  
A>Status: preliminary; translated from GB/EMBL/DDBJ  
A:Molecule type: mRNA  
A:Residues: 1-180 <RES>  
A:Cross-references: UNIPARC:UPI000012D40E; EMBL:X13101; NID:g204923; PIDN:CAA34674.1; PIR:R1WHITFIeld, H.U.; Bruni, C.B.; Frunzio, R.; Terrell, J.E.; Nislesley, S.P.; Rechler, M.M.  
Nature 312, 277-280, 1994  
A>Title: Isolation of a cDNA clone encoding rat insulin-like growth factor-II precursor  
A:Reference number: I58058; MUID:85061532; PMID:6390212  
A:Accession: I58058  
A>Status: preliminary; translated from GB/EMBL/DDBJ  
A:Molecule type: mRNA  
A:Residues: 62-180 <RE2>  
A:Cross-references: UNIPARC:UPI00001709CB; GB:M30273; NID:g204923; PIDN:AAA41432.1; PID:R1UENO, T.; Takahashi, K.; Matsuguchi, T.; Ikejiri, K.; Endo, H.; Yamamoto, M.  
Biochim. Biophys. Acta 1009, 27-34, 1989  
A>Title: Multiple polyadenylation sites in a large 3'-most exon of the rat insulin-like  
A:Reference number: I52428; MUID:90001243; PMID:2477062  
A:Accession: I52428  
A>Status: preliminary; translated from GB/EMBL/DDBJ  
A:Molecule type: mRNA  
A:Residues: 103-180 <RE3>  
A:Cross-references: UNIPARC:UPI000000677; EMBL:X16703; NID:g288512; PIDN:CAA34674.1; PIR:R1CHARIOCTI, L.; Brown, A.L.F.; Fumazto, R.; Clemmons, D.R.; Rechler, M.M.; Bruni, C.B.  
Mol. Endocrinol. 2, 1115-1126, 1988  
A>Title: Structure of the rat insulin-like growth factor II transcriptional unit: Heterotrimeric ribonucleic acid splicing.  
A:Reference number: I57695; MUID:89127259; PMID:3221878  
A:Accession: I57695  
A>Status: preliminary; translated from GB/EMBL/DDBJ  
A:Molecule type: DNA  
A:Residues: 103-180 <RE4>  
A:Cross-references: UNIPARC:UPI000000677; GB:M31221; NID:g206667; PIDN:AAA42046.1; PID:R1RECHLER, M.M.; Bruni, C.B.; Whitefield, H.U.; Yang, Y.W.  
Cancer Cells 3, 131-138, 1985  
A>Title: Characterization of the biosynthetic precursor for rat insulin-like growth factor  
A:Reference number: I52680  
A:Accession: I52680  
A>Status: preliminary; translated from GB/EMBL/DDBJ  
A:Molecule type: mRNA  
A:Residues: 27-56, 'G', 58-180 <RE5>  
A:Cross-references: UNIPARC:UPI0000006983; GB:M38688; NID:g204925; PIDN:AAA41433.1; PID:R1CROMMER, Although structurally and functionally related to insulin, the insulin-like growth factor, in vivo, their functions appear to differ. IGF-II is influenced by placental lactogen C:Genetics:  
A:Gene: IGFI1  
A:Introns: 53/1; 102/3  
C:Superfamily: insulin  
C:Keywords: growth factor; mitogen; plasma  
F:1-24/Domain: signal sequence #status predicted <SIG>  
F:25-91/Product: insulin-like growth factor II (active) #status experimental <MAT>  
F:25-56/Domain: insulin B chain-like #status experimental <DOB>  
F:57-64/Domain: insulin connecting C peptide-like #status experimental <CPB>  
F:65-85/Domain: insulin A chain-like #status experimental <DOA>  
F:86-91/Domain: insulin D peptide-like #status experimental <DDP>  
F:92-180/Domain: carboxyl-terminal propeptide (B peptide) #status experimental <CHB>  
F:33-71, 45-84, 70-75/disulfide bonds: #status predicted

Query Match 74.3% Score 142; DB 1; Length 180;  
Best Local Similarity 73.5%; Pred. No. 2, 6e-12;  
Matches 25; Conservative 4; Mismatches 5; Indels 0; Gaps 0;

OY 1 DVSTPEPTVLADNFPRYPVKGKFOYDTWKOSTQRL 34  
|||||  
Db 93 DVSTSQAVLPDPDFRPVKGKFKFDTRQSAGRL 126  
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RESULT 9  
IGBO2  
insulin-like growth factor II precursor - bovine  
N:Alternate names: IGF-II  
C:Species: Bos primigenius taurus (cattle)  
C:Date: 31-Mar-1988 #sequence\_revision 22-Apr-1995 #text\_change 09-Jul-2004

RESULT 10

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C:Accession: S10983; S37617; B25623; A34645; S00466; A57470
R:Brown, W.M.; Dzielągiewska, K.M.; Foreman, R.C.; Saunders, N.R.
Nucleic. Acids Res. 18, 4614, 1990
A:Title: The nucleotide and deduced amino acid sequences of insulin-like growth factor
A:Reference number: S10983; MUID:90356421; PMID:2388846
A:Accession: S10983
A:Molecule type: mRNA
A:Residues: 6-155 <BR>
A:Cross-references: UNIPROT:P07456; UNIPARC:UPI000016C328; EMBL:X53553; NID:g459; PIDN:
A:Experimental source: Liver
R:Congote, L.F.; Mazza, L.; Palfree, R.G.E.
Comp. Biochem. Physiol. B 103, 127-131, 1992
A:Title: Nucleotide sequence of the central coding region of bovine erythropoietin/insulin
time of hepatic erythropoiesis.
A:Reference number: S37617; MUID:93083057; PMID:1280544
A:Accession: S37617
A:Molecule type: mRNA
A:Residues: 6-62 <CON>
A:Cross-references: UNIPARC:UPI000016C329; EMBL:X53867; NID:g461; PIDN:CAA37861.1; PID:
A:Experimental source: Fetal intestine
R:Honegger, A.; Humbel, R.E.
J. Biol. Chem. 261, 569-575, 1986
A:Title: Insulin-like growth factors I and II in fetal and adult bovine serum. Purifica
A:Reference number: A92585; MUID:86085881; PMID:3941093
A:Accession: B25623
A:Molecule type: protein
A:Residues: 1-34, 'S', '36-67 <HON>
A:Cross-references: UNIPARC:UPI000017358C
R:Li, Q.; Blacher, R.; Bach, F.; Congote, L.F.
Biochem. Biophys. Res. Commun. 166, 557-561, 1990
A:Title: A heparin-binding erythroid cell stimulating factor from fetal bovine serum ha
A:Reference number: A34645; MUID:90147754; PMID:2302223
A:Accession: A34645
A:Molecule type: protein
A:Residues: 1-8, 'X', '10-20, 'X', '22-31 <LIO>
A:Cross-references: UNIPARC:UPI000017358D
R:Francis, G.L.; Upton, F.M.; Ballard, F.J.; McNeil, K.A.; Wallace, J.C.
Biochem. J. 251, 95-103, 1988
A:Title: Insulin-like growth factors 1 and 2 in bovine colostrum. Sequences and biologi
A:Reference number: S00465; MUID:88268820; PMID:3390164
A:Accession: S00466
A:Molecule type: protein
A:Residues: 1-67 <FRA>
A:Cross-references: UNIPARC:UPI0000141BC9
R:Valenzano, K.J.; Remmler, J.; Lobel, P.
J. Biol. Chem. 270, 16441-16448, 1995
A:Title: Soluble insulin-like growth factor II/mannose 6-phosphate receptor carries mul
A:Reference number: A57470; MUID:95332360; PMID:7608216
A:Accession: A57470
A:Status: preliminary
A:Molecule type: protein
A:Residues: 1-5 <VAL>
A:Cross-references: UNIPARC:UPI000017358E
C:Superfamily: Insulin
C:Keywords: colostrum; growth factor; heparin binding; mitogen; plasma
F:1-67/Product: insulin-like growth factor II #status experimental <DMAT>
F:1-27/Domain: insulin B chain-like #status experimental <DOB>
F:28-40/Domain: insulin connecting C peptide-like #status experimental <CPB>
F:41-61/Domain: insulin A chain-like #status experimental <DOA>
F:62-67/Domain: D peptide #status experimental <CHD>
F:68-155/Domain: carboxyl-terminal propeptide (B peptide) #status predicted <CHE>
F:9-47, 21-60, 46-51/Disulfide Bonds: #status predicted
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153642  
insulin-like growth factor II precursor - horse (fragment)  
C/Species: Equus caballus (domestic horse)  
C/Date: 15-Oct-1996 #sequence\_revision 15-Oct-1996 #text\_change 09-Jul-2004  
C/Accession: I53642  
R/Otte, K.; Engstrom, W.  
Gen. Comp. Endocrinol. 96, 270-275, 1994  
A/Title: Insulin-like growth factor II in the horse: determination of a cDNA nucleotide  
A/Reference number: I53642; MUID:95154655; PMID:7851727  
A/Accession: I53642  
A/Status: preliminary; translated from GB/EMBL/DBJ  
A/Molecule type: mRNA  
A/Residues: 1-93 <OTT>  
A/Cross-references: UNIPROT:P51459; UNIPARC:UPI000016C420; EMBL:U11241; NID:9508703; PID:  
C/Genetics:  
A/Gene: IGF-II  
C/Superfamily: insulin

Query Match 60.2%; Score 115; DB 2; Length 93;  
Best Local Similarity 84.0%; Pred. No. 6; 9e-09;  
Matches 21; Conservative 2; Mismatches 2; Indels 0; Gaps 0;

QY 1 DVSTPPTVLPDNPFRYPVCKFPQYD 25  
|||||  
DB 69 DVSTPPTVLPDNPFRYPVCKFPQYD 93

RESULT 11  
S16891  
probable transposase (insertion sequence IS701) - Calothrix sp. (PCC 7601)  
C/Species: Calothrix sp.  
A/Variety: PCC 7601  
C/Date: 21-Nov-1993 #sequence\_revision 23-Feb-1996 #text\_change 15-Oct-1999  
C/Accession: S16891; S16749  
R/Mazel, D.; Bernard, C.; Schwarz, R.; Casetis, A.M.; Houward, J.; Tandeau de Marsac, N.  
Mol. Microbiol. 5, 2165-2170, 1991  
A/Title: Characterization of two insertion sequences, IS701 and IS702, from the cyanobac  
A/Reference number: S16891; MUID:92114795; PMID:1662761  
A/Accession: S16891  
A/Molecule type: DNA  
A/Residues: 1-380 <MAZ>  
A/Cross-references: UNIPARC:UPI0000136844; EMBL:X60383; NID:940655; PIDN:CAA42934.1; PID:  
A/Experimental source: PCC 7601  
C/Genetics:  
A/Mobile element: insertion sequence IS701  
C/Keywords: DNA binding

Query Match 30.4%; Score 58; DB 2; Length 380;  
Best Local Similarity 34.7%; Pred. No. 2; 9;  
Matches 17; Conservative 4; Mismatches 12; Indels 16; Gaps 3;

QY 2 VSTPPTVLPDNPFRYPVCKFPQYD 34  
|||||  
DB 267 ITTDPENLPDNPFRYPVCKFPQYD 315

RESULT 12  
S81719  
signal peptidase, probable TCO289 [imported] - Chlamydia muridarum (strain Nigg)  
C/Species: Chlamydia muridarum, Chlamydia trachomatis Mohn  
C/Date: 31-Mar-2000 #sequence\_revision 31-Mar-2000 #text\_change 09-Jul-2004  
C/Accession: G81719  
R/Read, T.D.; Brumham, R.C.; Shen, C.; Gill, S.R.; Heideberg, J.F.; White, O.; Hickey,  
C.; Dodson, R.; Gwin, M.; Nelson, W.; Deboy, R.; Kolonay, J.; McClarty, G.; Salzberg,  
Nucleic Acids Res. 28, 1397-1406, 2000  
A/Title: Genome sequences of Chlamydia trachomatis Mohn and Chlamydia pneumoniae AR39.  
A/Reference number: A81500; MUID:20150255; PMID:10684935  
A/Accession: G81719  
A/Status: preliminary  
A/Molecule type: DNA  
A/Residues: 1-627 <RT>  
A/Cross-references: UNIPROT:Q9PL19; UNIPARC:UPI0000057881; GB:AE002296; GB:AE002160; NID:  
A/Experimental source: strain Nigg (Mohn)

C/Genetics:  
A/Gene: TCO289

Query Match 28.8%; Score 55; DB 2; Length 627;  
Best Local Similarity 45.0%; Pred. No. 13;  
Matches 9; Conservative 3; Mismatches 8; Indels 0; Gaps 0;

QY 12 NFRYPVCKFPQYDPTWKOST 31  
|||||  
DB 255 SFPHYSHQGFYKDYAMHKOT 274

RESULT 13  
C84900  
hypothetical protein At2g46230 [imported] - Arabidopsis thaliana  
C/Species: Arabidopsis thaliana (mouse-ear cress)  
C/Date: 02-Feb-2001 #sequence\_revision 02-Feb-2001 #text\_change 09-Jul-2004  
C/Accession: C84900  
R/Jin, X.; Kaul, S.; Rounsley, S.D.; Shea, T.P.; Benito, M.I.; Town, C.D.; Fujii, C.Y.;  
M.; Koo, H.; Moffat, K.S.; Cronin, L.A.; Shen, M.; Vanden, S.E.; Umayam, L.; Tallon, L.;  
eues, D.; Nierman, W.C.; White, O.; Eisen, J.A.; Salzberg, S.L.; Frazer, C.M.; Venter, J.  
Nature 402, 761-768, 1999  
A/Title: Sequence and analysis of chromosome 2 of the plant Arabidopsis thaliana.  
A/Reference number: A84420; MUID:20083487; PMID:10617197  
A/Accession: C84900  
A/Status: preliminary  
A/Molecule type: DNA  
A/Residues: 1-216 <STO>  
A/Cross-references: UNIPROT:O82346; UNIPARC:UPI000017995D; GB:AE002093; NID:93702326; PI:  
C/Genetics:  
A/Gene: At2g46230  
A/Map position: 2

Query Match 28.3%; Score 54; DB 2; Length 216;  
Best Local Similarity 50.0%; Pred. No. 5; 4;  
Matches 10; Conservative 2; Mismatches 8; Indels 0; Gaps 0;

QY 7 TVLPDNPFRYPVCKFPQYD 26  
|||||  
DB 38 TELPRNVPSVPAGLFPFSNS 57

RESULT 14  
B72565  
hypothetical protein APE1804 - Aeropyrum pernix (strain K1)  
C/Species: Aeropyrum pernix  
C/Date: 20-Aug-1999 #sequence\_revision 20-Aug-1999 #text\_change 09-Jul-2004  
C/Accession: B72565  
R/Kawarabayashi, Y.; Hino, Y.; Horikawa, H.; Yamazaki, S.; Hatakeyama, Y.; Jin-no, K.; Takah  
awa, H.; Takamiya, M.; Masuda, S.; Funahashi, T.; Tanaka, T.; Kudoh, Y.; Yamazaki, J.; K  
DNA Res. 6, 83-101, 1999  
A/Title: Complete genome sequence of an aerobic hyper-thermophilic Crenarchaeon, Aeropyr  
A/Reference number: A72450; MUID:99310339; PMID:10382966  
A/Accession: B72565  
A/Status: preliminary  
A/Molecule type: DNA  
A/Residues: 1-418 <RAM>  
A/Cross-references: UNIPROT:Q9YAZ1; UNIPARC:UPI000005E0C3; DDBJ:AP000062; NID:95105244;  
C/Genetics:  
A/Gene: APE1804  
C/Superfamily: Aeropyrum pernix hypothetical protein APE1276

Query Match 27.5%; Score 52.5; DB 2; Length 418;  
Best Local Similarity 40.7%; Pred. No. 18;  
Matches 11; Conservative 3; Mismatches 10; Indels 3; Gaps 1;

QY 5 PPTVLPDNPFRYPVCKFPQYD 28  
|||||  
DB 14 PPTVLPDNPFRYPVCKFPQYD 40

RESULT 15

AB2789

Competence-damage associated protein [imported] - *Agrobacterium tumefaciens* (strain C58,C:/Species: *Agrobacterium tumefaciens*

C:/Date: 11-Jan-2002 #sequence\_revulsion 11-Jan-2002 #text\_change 05-Oct-2004

C:/Accession: AB2789

R:/Wood, D.W.; Setubal, J.C.; Kaul, R.; Monke, D.; Chen, L.; Wood, G.B.; Chen, Y.; Woo, D.  
erage, G.; Gillet, W.; Grant, C.; Guentner, D.; Kutayavtn, T.; Levy, R.; Li, M.; McClell

Science 294, 2317-2323, 2001

A:/Authors: Yoo, H.; Tao, Y.; Biddle, P.; Jung, M.; Krespan, W.; Perry, M.; Gordon-Kamm,  
ster, B.W.A:/Title: The Genome of the Natural Genetic Engineer *Agrobacterium tumefaciens* C58.

A:/Reference number: AB2577; NCID:21608550; PMID:11743193

A:/Accession: AB2789

A:/Status: preliminary

A:/Molecule type: DNA

A:/Residues: 1-263 &lt;KUR&gt;

A:/Cross-references: UNIPROT:Q8UEN8; UNIPARC:UPI000016463D; GB:AE008688; PIDN:AL42728.1;

A:/Experimental source: strain C58 (Dupont)

C:/Genetics:

A:/Gene: ctnA

A:/Map position: circular chromosome  
C:/Superfamily: molybdopterin binding protein related to CtnA

Query Match	27.2%	Score 52;	DB 2;	Length 263;
Best Local Similarity	31.2%	Pred. No. 13;		
Matches 10;	Conservative 7;	Mismatches 15;	Indels 0;	Gaps 0;

Qy	1	DVSTPTVL	PDNFP	RYPV	GKFF	QYDT	WKOSTQ	32
Db	192	DIGTPTLAIQKAH	PETISG	SYPKYD	GQR	PSTE	223	

Search completed: May 21, 2006, 12:46:51  
 Job time : 20.6667 secs

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## Protein Sequence Searches - February 2005

All of the sequence databases on ABSS have recently been updated.

- Please note that the curators of the UniProt database have purged some temporary accession numbers from the most recent version of UniProt. These sequences have been assigned new permanent accession numbers. The new UniProt record may not contain the previous temporary accession number.
- If you encounter an accession number from an older search run against UniProt (results file extension **.rnp**) that can no longer be found in the database, the permanent record with the new accession number can be found by searching the old accession number in the UniProt Protein Archive database (UniPARC) at:

<http://www.pir.uniprot.org/database/archive.shtml>

If you have any questions regarding this information or your results, please contact any STIC searcher.

When submitting sequence search results for scanning into IFW, please include a copy of this attachment to assist any future Examiners or members of the public who may encounter UniProt temporary accession numbers.

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GenCore version 5.1.8  
Copyright (c) 1993 - 2006 Bioacceleration Ltd.

OM protein - protein search, using sw model

Run on: May 21, 2006, 12:31:30 ; Search time 162.333 Seconds

(without alignments)  
193.740 Million cell updates/sec

Title: US-10-632-366-1

Perfect score: 191  
Sequence: 1 DVSTPEPTVLPDNPFRYPVGKFFQYDTWKSTQRL 34

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 2849598 seqs, 925015592 residues

Total number of hits satisfying chosen parameters: 2849598

Minimum DB seq length: 0  
Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%  
Maximum Match 100%

Listing first 45 summaries

Database : UniProt 7.2:\*  
1: uniprot\_sprot:\*  
2: uniprot\_trembl:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	191	100.0	180	1	IGF2_HUMAN
2	186	97.4	129	1	IGF2_MOUSE
3	182	95.3	181	1	IGF2_PIG
4	168	88.0	123	2	Q8WU15_PIG
5	160	83.8	128	1	IGF2_CAVPO
6	153	80.1	115	2	Q5O0X5_EQUUS
7	153	80.1	181	1	IGF2_HORSE
8	150	78.5	180	1	IGF2_MOUSE
9	150	78.5	180	2	Q2IDG5_MUSPSP
10	150	78.5	191	2	Q2IDG7_MUSPSP
11	142	74.3	154	2	Q63265_RAT
12	142	74.3	179	1	IGF2_SHEEP
13	142	74.3	180	1	IGF2_RAT
14	138	72.3	104	2	Q862E7_BOVIN
15	138	72.3	113	2	Q9N1S5_CAPCA
16	138	72.3	141	2	Q862G1_BOVIN
17	138	72.3	149	2	Q9MYX4_BOVIN
18	138	72.3	155	1	IGF2_BOVIN
19	119	62.3	184	2	Q673F2_DIDMA
20	115	60.2	62	2	Q9X888_HORSE
21	114	59.7	106	2	Q9MYZ6_TRIUV
22	110	57.6	78	2	Q53WT7_RAT
23	104	54.5	57	2	Q28237_CEREL
24	64	33.5	3147	2	Q4RKM3_TETNG
25	60.5	31.7	2859	2	Q4P8S3_USTMA
26	60	31.4	285	2	Q5ATM0_EMENI
27	58	30.4	380	1	T701_FREDD
28	58	30.4	779	2	Q4STG7_TETNG
29	57.5	30.1	555	2	Q70ET1_ANOGA
30	57	29.8	264	2	Q7VA26_PROMM
31	57	29.8	536	2	Q6CVJ2_KLULA

## ALIGNMENTS

RESULT 1	IGF2_HUMAN	STANDARD	PRT	180 AA.
AC	P01344; P78449; Q14299; Q9UC68; Q9UC69;			
DT	21-JUL-1986, integrated into UniProtKB/Swiss-Prot.			
DT	21-JUL-1986, sequence version 1.			
DT	07-FEB-2006, entry version 81.			
DE	Insulin-like growth factor II precursor (IGF-II) (Somatomedin A)			
DE	[Contains: Insulin-like growth factor II Ala-25 Del].			
GN	Name=IGF2; ORFNames=PI1446;			
OS	Homo sapiens (Human).			
OC	Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;			
OC	Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;			
OC	Homo.			
OX	NCBI_TaxID=9606;			
RN	[1]			
RP	NUCLEOTIDE SEQUENCE [ISOFORM 1].			
RX	MEDLINE=84295593; PubMed=6382022;			
RA	Dull T.T., Gray A., Hayflick J.S., Ullrich A.;			
RT	"Insulin-like growth factor II precursor gene organization in relation to insulin gene family.";			
RL	Nature 310:777-781(1984).			
RN	[2]			
RP	NUCLEOTIDE SEQUENCE [ISOFORM 1].			
RX	MEDLINE=84295592; PubMed=6382021.			
RA	Beil G.L., Merryweather J.P., Sanchez-Pescador R., Stempien M.M.,			
RT	Priestley L., Scott J., Rall L.B.;			
RL	"Sequence of a cDNA clone encoding human preproinsulin-like growth factor II.";			
RL	Nature 310:775-777(1984).			
RN	[3]			
RP	NUCLEOTIDE SEQUENCE [ISOFORM 1].			
RX	MEDLINE=88158110; PubMed=2450353;			
RA	Shen S.-J., Daimon M., Wang C.-Y., Jansen M., Iian J.;			
RT	"Isolation of an insulin-like growth factor II cDNA with a unique 5' untranslated region from human placenta.";			
RL	Proc. Natl. Acad. Sci. U.S.A. 85:1947-1951(1988).			
RN	[4]			
RP	NUCLEOTIDE SEQUENCE [ISOFORM 1].			
RX	MEDLINE=86108862; PubMed=3002851; DOI=10.1016/0014-5793(86)80156-9;			
RA	de Pagter-Holthuijzen P., van Schaik F.M.A., Verduijn G.M.,			
RT	van Ommen G.J.B., Bouma B.N., Jansen M., Susembach J.S.;			
RL	"Organization of the human genes for insulin-like growth factors I and II.";			
RL	FEBS Lett. 195:179-184(1986).			
RN	[5]			
RP	NUCLEOTIDE SEQUENCE [MRNA] [ISOFORM 1].			
RX	MEDLINE=87317645; PubMed=3476948;			
RA	Irimonger J.C., Rosen K.M., Hummel R.E., Villa-Komaroff L.;			
RT	"Tissue-specific expression of insulin-like growth factor II mRNAs with distinct 5' untranslated regions.";			
RL	Proc. Natl. Acad. Sci. U.S.A. 84:6330-6334(1987).			
RN	[6]			
RP	NUCLEOTIDE SEQUENCE [MRNA] [ISOFORM 1].			

32	56.5	29.6	153	2	Q6C2V1_YARLI	Q6C2V1_yarrowia li
33	56.5	29.6	305	2	Q82LP8_STRAM	Q82LP8_streptomyce
34	56.5	29.6	546	2	Q4MPZ8_BACE	Q4MPZ8_bacillus ce
35	56.5	29.6	1168	2	Q41T81_GIBEX	Q41T81_gibberella
36	56	29.3	215	2	Q48NR7_PSEL4	Q48NR7_pseudomonas
37	56	29.3	215	2	Q88A26_PSEEM	Q88A26_pseudomonas
38	56	29.3	229	2	Q4ZMT9_PSEU2	Q4ZMT9_pseudomonas
39	56	29.3	298	2	Q5WL10_BACSK	Q5WL10_bacillus cl
40	56	29.3	351	2	Q4PIH9_USTMA	Q4PIH9_ustilago ma
41	55.5	29.1	187	2	Q57687_9PASE	Q57687_tenopysgia
42	55.5	29.1	875	2	Q2S2D8_9SPHI	Q2S2D8_salimibacte
43	55	28.8	395	2	Q2RIJ3_MOOTH	Q2RIJ3_moorella th
44	55	28.8	627	2	Q9PLI3_CHAMU	Q9PLI3_chlamydia m
45	55	28.8	651	2	Q56A50_BRARE	Q56A50_brachydanio

RA MEDLINE=88065102; PubMed=3683205;  
RA Rall L.B., Scott J., Bell G.I.;  
RT "Human insulin-like growth factor I and II messenger RNA: isolation of  
RT complementary DNA and analysis of expression.";  
RL Methods Enzymol. 146:239-246(1987).  
RN [17]  
RP NUCLEOTIDE SEQUENCE [MRNA] (ISOFORMS 1 AND 2).  
RX MEDLINE=85102019; PubMed=3881277; DOI=10.1016/0014-5793(85)80527-5;  
RA Jansen M., van Schaik F.M.A., van Tol H., van den Brande J.L.,  
RA Susenbach J.S.;  
RT "Nucleotide sequences of cDNAs encoding precursors of human insulin-  
RL like growth factor II (IGF-II) and an IGF-II variant.";  
RL FEBS Lett. 179:243-246(1985).  
RN [18]  
RP NUCLEOTIDE SEQUENCE [MRNA] (ISOFORM 1).  
RX MEDLINE=95247546; PubMed=7730145;  
RA Hagiwara K., Kobayashi T., Tobita M., Kikyo N., Yazaki Y., Okabe T.;  
RT "Isolation of a cDNA for a growth factor of vascular endothelial cells  
RT from human lung cancer cells: its identity with insulin-like growth  
RT factor II.";  
RL Jpn. J. Cancer Res. 86:202-207(1995).  
RN [19]  
RP NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA] (ISOFORM 1).  
RX PubMed=15498874; DOI=10.1073/pnas.0404089101;  
RA Man D., Gong Y., Qin W., Zhang P., Li J., Wei L., Zhou X., Li H.,  
RA Qiu X., Zhong F., He L., Yu J., Yao G., Jiang H., Qian L., Yu Y.,  
RA Shu H., Chen X., Xu H., Guo M., Pan Z., Chen Y., Ge C., Yang S.,  
RA Gu J.;  
RT "Large-scale cDNA transfection screening for genes related to cancer  
RT development and progression.";  
RL Proc. Natl. Acad. Sci. U.S.A. 101:15724-15729(2004).  
RN [10]  
RP NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA] (ISOFORM 1).  
RX Kaimine N., Chen X., Rolfs A., Halleck A., Hines L., Eisenstein S.,  
RA Kandinya N., Raphael J., Moreira D., Kelley T., Labaer J., Lin Y.,  
RA Pheilan M., Farmer A.;  
RT "Cloning of human full-length cDNAs in BD Creator(TM) system donor  
RT vector.";  
RL Submitted (MAY-2003) to the EMBL/GenBank/DBJ databases.  
RN [11]  
RP NUCLEOTIDE SEQUENCE [GENOMIC DNA].  
RX Rieder M.J., Amel T.Z., Carrington D.P., Ozuna M., Kuldanek S.A.,  
RA Rajkumar N., Toth E.J., Yi Q., Nickerson D.A.;  
RT Seacrest N.E., NHLBI HUG6682 program for genomic applications, UM-  
FHCR, Seattle, WA (URL: <http://pga.gs.washington.edu>).";  
RL Submitted (MAY-2002) to the EMBL/GenBank/DBJ databases.  
RN [12]  
RP NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA] (ISOFORM 1).  
RX TISSUE=Muscle;  
MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;  
RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,  
RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,  
RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,  
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,  
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,  
RA Scapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Schetz T.E.,  
RA Brownstein M.J., Ueda T.B., Toshiyuki S., Carninci P., Prange C.,  
RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullaly S.J.,  
RA Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,  
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,  
RA Villalón D.K., Murthy K.C., Sodergren E.J., Lu X., Gibbs R.A.,  
RA Fahy J., Heiton E., Kettman M., Madan A.C., Rodriguez S., Sanchez A.,  
RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,  
RA Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,  
RA Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smolius D.E.,  
RA Scherch A., Schein J.E., Jones S.J.M., Marra M.A.;  
RT "Generation and initial analysis of more than 15,000 full-length human  
RT and mouse cDNA sequences.";  
RL Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).  
RN [13]  
RP NUCLEOTIDE SEQUENCE OF 103-180.  
RX MEDLINE=89000779; PubMed=3167054; DOI=10.1016/0167-4781(89)90124-8;  
RA de Pagter-Holthuisen P., van der Kammen R.A., Jansen M.,  
RA van Schaik F.M.A., Susenbach J.S.;  
RT "Differential expression of the human insulin-like growth factor II  
RT gene. Characterization of the IGF-II mRNAs and an mRNA encoding a  
RT putative IGF-II-associated protein.";  
RL Biochim. Biophys. Acta 950:282-295(1998).  
RN [14]  
RP NUCLEOTIDE SEQUENCE OF 1-161 (ISOFORM 2).  
RX MEDLINE=88005137; PubMed=3653397; DOI=10.1016/0014-5793(87)80216-8;  
RA le Bouc Y., Noguez P., Sondermeijer P., Dreyer D., Girard F.,  
RA Binoux M.;  
RT "A new 5'-non-coding region for human placental insulin-like growth  
RT factor II mRNA expression.";  
RL FEBS Lett. 222:181-185(1987).  
RN [15]  
RP NUCLEOTIDE SEQUENCE OF 1-52.  
RX TISSUE=Liver;  
MEDLINE=88003966; PubMed=3652904;  
RA Gray A., Tam A.W., Dull T.J., Hayflick J.S., Pintar J., Cavenne W.K.,  
RA Koulos A., Ulrich A.;  
RT "Tissue-specific and developmentally regulated transcription of the  
RT insulin-like growth factor 2 gene.";  
RL DNA 6:283-295(1987).  
RN [16]  
RP PROTEIN SEQUENCE OF 25-91.  
RX MEDLINE=78191259; PubMed=658418; DOI=10.1016/0014-5793(78)80237-3;  
RA Rinderknecht E., Hummel R.E.;  
RT "Primary structure of human insulin-like growth factor II.";  
RL FEBS Lett. 89:283-286(1978).  
RN [17]  
RP PARTIAL PROTEIN SEQUENCE AND DISULFIDE BONDS.  
RX MEDLINE=89255428; PubMed=2722836;  
RA Smith W.C., Cook J.A., Furman T.C., Occolowitz J.L.;  
RT "Structure and activity dependence of recombinant human insulin-like  
RT growth factor II on disulfide bond pairing.";  
RL J. Biol. Chem. 264:9314-9321(1989).  
RN [18]  
RP PROTEIN SEQUENCE OF 25-68.  
RX MEDLINE=95360205; PubMed=7633596; DOI=10.1016/0378-4347(94)00576-Q;  
RA De Ceuninck F., Willeput J., Corvol M.;  
RT "Purification and characterization of insulin-like growth factor II  
RT (IGF II) and an IGF II variant from human placenta.";  
RL J. Chromatogr. B 666:203-214(1995).  
RN [19]  
RP MASS SPECTROMETRY AND PROCESSING.  
RX MEDLINE=22474139; PubMed=12586351; DOI=10.1016/S0014-5793(03)00042-5;  
RA Nedelkov D., Nelson R.W., Kiernan U.A., Niederkofer E.E., Tubbs K.A.;  
RT "Detection of bound and free IGF-1 and IGF-2 in human plasma via  
RT biomolecular interaction analysis mass spectrometry.";  
RL FEBS Lett. 536:130-134(2003).  
RN [20]  
RP MASS SPECTROMETRY AND PROCESSING.  
RX PubMed=15359740; DOI=10.1021/pr0499388;  
RA Nelson R.W., Nedelkov D., Tubbs K.A., Kiernan U.A.;  
RT "Quantitative mass spectrometric immunoassay of insulin like growth  
RT factor I.";  
RL J. Proteome Res. 3:851-855(2004).  
RN [21]  
RP CARBOHYDRATE-LINKAGE SITE THR-99.  
RX MEDLINE=92235026; PubMed=1569071;  
RA Huddins W.R., Hampton B., Burgess W.H., Perdue J.F.;  
RT "The identification of O-glycosylated precursors of insulin-like  
RT growth factor II.";  
RL J. Biol. Chem. 267:8153-8160(1992).  
RN [22]  
RP 3D-STRUCTURE MODELING.  
RX MEDLINE=833210259; PubMed=6189745;  
RA Blundell T.L., Bedarkar S., Hummel R.E.;  
RT "Tertiary structures, receptor binding, and antigenicity of  
RT insulinlike growth factors.";  
RL Fed. Proc. 42:2592-2597(1983).  
RN [23]  
RP STRUCTURE BY NMR.



RX MEDLINE=95080243; PubMed=7527339;  
RA Teraawa H., Kohda D., Hatanaka H., Nagata K., Higashihashi N.,  
Query Match 100.0%; Score 191; DB 1; Length 180;  
Best Local Similarity 100.0%; Pred. No. 4.6e-18;  
Matches 34; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 DVSTPPTVLDPNPFPRYPVGKFPQYDTWKOSTORL 34  
DB 93 DVSTPPTVLDPNPFPRYPVGKFPQYDTWKOSTORL 126

RESULT 2  
IGF2\_MUSVI STANDARD; PRT; 129 AA.  
ID IGF2\_MUSVI  
AC P41694;  
DT 01-NOV-1995, integrated into UniProtKB/Swiss-Prot.  
DT 01-NOV-1995, sequence version 1.  
DT 07-FEB-2006, entry version 34.  
DE Insulin-like growth factor II precursor (IGF-II) (Fragment).  
GN Name=IGF2;  
OS Mus musculus (American mink).  
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
OC Mammalia; Eutheria; Laurasiatheria; Carnivora; Fissipedia; Mustelidae;  
OC Mustelinae; Mustela.  
OX NCBI\_TaxID=9667;  
RN [1]  
RP NUCLEOTIDE SEQUENCE [MRNA].  
RC TISSUE=Liver;  
RX MEDLINE=93307613; PubMed=7686523; DOI=10.1006/gen.1993.1079;  
RA Ekstrom T.J., Baecklin B.M., Lindqvist Y., Ekstrom W.;  
RT "Insulin-like growth factor II in the mink (Mustela vison):  
determination of a cDNA nucleotide sequence and developmental  
regulation of its expression."  
Gen. Comp. Endocrinol. 90:243-250(1993).  
-1- FUNCTION: The insulin-like growth factors possess growth-promoting  
activity. In vitro, they are potent mitogens for cultured cells.  
IGF-II is influenced by placental lactogen and may play a role in  
fetal development.  
-1- SUBCELLULAR LOCATION: Secreted protein.  
-1- SIMILARITY: Belongs to the insulin family.  
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CC Distributed under the Creative Commons Attribution-NonDerivs license  
CC  
EMBL: S63459; AAB27392.2; -; mRNA.  
DR HSSP; P01344; 1IGL.  
DR SMR; P41694; 25-92.  
DR InterPro; IPR004825; Ins/IGF/relax.  
DR Pfam; PF000649; Insulin; 1.  
DR PRINTS; PR002777; INSULINB.  
DR SMART; SM00078; IIGF; 1.  
DR PROSITE; PS00262; INSULIN; 1.  
KW Growth factor; Mitogen; Signal.  
FT SIGNAL 1 24 By similarity.  
FT CHAIN 25 92 Insulin-like growth factor II.  
FT PROPEP 93 >129 /FTID=PRO\_0000015722.  
FT REGION 25 52 E peptide (By similarity).  
FT REGION 53 65 /FTID=PRO\_0000015723.  
FT REGION 66 86 B.  
FT REGION 87 92 C.  
FT REGION 87 92 A.  
FT DISULFID 33 72 D.  
FT DISULFID 45 85 By similarity.  
FT DISULFID 71 76 By similarity.  
FT NON TER 129 129 By similarity.  
SO SEQUENCE 129 AA; 14437 MW; FD06661DAFB473D0 CRC64;

Query Match 97.4%; Score 186; DB 1; Length 129;  
Best Local Similarity 97.1%; Pred. No. 1.5e-17;  
Matches 33; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 DVSTPPTVLDPNPFPRYPVGKFPQYDTWKOSTORL 34  
DB 94 DVSTPPTVLDPNPFPRYPVGKFPQYDTWKOSTORL 127

RESULT 3  
IGF2\_PIG STANDARD; PRT; 181 AA.  
ID IGF2\_PIG  
AC P23695;  
DT 01-NOV-1991, integrated into UniProtKB/Swiss-Prot.  
DT 01-FEB-1996, sequence version 2.  
DT 07-FEB-2006, entry version 48.  
DE Insulin-like growth factor II precursor (IGF-II).  
GN Name=IGF2;  
OS Sus scrofa (Pig).  
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
OC Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Suidae;  
OC Sus.  
OX NCBI\_TaxID=9823;  
RN [1]  
RP NUCLEOTIDE SEQUENCE.  
RX MEDLINE=91057136; PubMed=2243790;  
RA Catchpole I.R., Engstrom W.;  
RT "Nucleotide sequence of a porcine insulin-like growth factor II  
cDNA."  
Nucleic Acids Res. 18:6430-6430(1990).  
RN [2]  
RP NUCLEOTIDE SEQUENCE.  
RC STRAIN=Large white;  
RX MEDLINE=2215958; PubMed=12140686; DOI=10.1007/s00335-001-3059-x;  
RA Aarager V., Nguyen M., Van Laere A.-S., Braunschweig M., Nezer C.,  
RT Georges M., Andersson L.;  
RT "Comparative sequence analysis of the INS-IGF2-H19 gene cluster in  
pigs."  
Mamm. Genome 13:388-398(2002).  
RN [3]  
RP NUCLEOTIDE SEQUENCE.  
RC STRAIN=European wild boar, Hampshire, Japanese wild boar, Landrace,  
RX Large white, Meishan, and Pietrain;  
RX MEDLINE=22935770; PubMed=14574411; DOI=10.1038/nature02064;  
RA Van Laere A.-S., Nguyen M., Braunschweig M., Nezer C., Collette C.,  
RT Moreau L., Archibald A.L., Haley C., Buys N., Tally M., Andersson G.,  
RT Georges M., Andersson L.;  
RT "A regulatory mutation in IGF2 causes a major QTL effect on muscle  
growth in the pig."  
Nature 425:832-836(2003).  
RN [4]  
RP PROTEIN SEQUENCE OF 25-91.  
RX MEDLINE=90039035; PubMed=2809477;  
RA Francis G.L., Owens P.C., McNeil K.A., Wallace J.C., Ballard F.J.;  
RT "Purification, amino acid sequences and assay cross-reactivities of  
RT porcine insulin-like growth factor-I and -II."  
J. Endocrinol. 122:681-687(1989).  
-1- FUNCTION: The insulin-like growth factors possess growth-promoting  
activity. In vitro, they are potent mitogens for cultured cells.  
IGF-II is influenced by placental lactogen and may play a role in  
fetal development.  
-1- SUBCELLULAR LOCATION: Secreted protein.  
-1- SIMILARITY: Belongs to the insulin family.  
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CC  
EMBL: X56094; CAA39574.1; -; mRNA.  
DR EMBL; AY044828; AAL69551.1; -; Genomic DNA.  
DR EMBL; AY242098; AA000953.1; -; Genomic DNA.  
DR EMBL; AY242099; AA000955.1; -; Genomic DNA.  
DR EMBL; AY242100; AA000958.1; -; Genomic DNA.  
DR EMBL; AY242101; AA000961.1; -; Genomic DNA.  
DR EMBL; AY242102; AA000964.1; -; Genomic DNA.  
DR EMBL; AY242103; AA000967.1; -; Genomic DNA.  
DR EMBL; AY242104; AA000970.1; -; Genomic DNA.  
DR EMBL; AY242105; AA000973.1; -; Genomic DNA.

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DR EMBL: AY242106; AAQ00976.1; -; Genomic DNA.
DR EMBL: AY242107; AAQ00979.1; -; Genomic DNA.
DR EMBL: AY242108; AAQ00982.1; -; Genomic DNA.
DR EMBL: AY242109; AAQ00984.1; -; Genomic DNA.
DR EMBL: AY242110; AAQ00986.1; -; Genomic DNA.
DR EMBL: AY242111; AAQ00988.1; -; Genomic DNA.
DR EMBL: AY242112; AAQ00991.1; -; Genomic DNA.
DR HSSP: P01344; 1IGL.
DR SMR: P23695; 25-91.
DR InterPro: IPR004825; Ins/IGF/relax.
DR InterPro: IPR003234; Insulin-like.
DR Pfam: PF00049; Insulin; 1.
DR PRINTS: PR00277; INSULIN.
DR ProDom: PD015667; MolIusc_ins; 1.
DR SMART: SM00078; IIGF; 1.
DR PROSITE: PS00262; INSULIN; 1.
DR Direct protein sequencing; Growth factor; Mitogen; Signal.
KM SIGNAL 1 24 Insulin-like growth factor II.
FT CHAIN 25 91
FT PROPEP 92 181
FT REGION 25 52 B.
FT REGION 53 64 C.
FT REGION 65 85 A.
FT REGION 86 91 D.
FT DISULFID 33 71 By similarity.
FT DISULFID 45 84 By similarity.
FT DISULFID 70 75 By similarity.
SQ SEQUENCE 181 AA; 20313 MW; 1816B935299B44E1 CRC64;

Query Match
Best local Similarity 95.3%; Score 182; DB 1; Length 181;
Matches 32; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Qy 1 DVSTPPTVLPDNFPRYPVGKFFQYDPTWKOSTRL 34
Db 93 DVSTPPTVLPDNFPRYPVGKFFRYDTWKOSQRL 126

RESULT 4
O8MJT5_PIG PRELIMINARY; PRT; 123 AA.
AC O8MJT5;
DT 01-OCT-2002, integrated into UniProtKB/TrEMBL.
DT 01-OCT-2002, sequence version 1.
DT 07-FEB-2006, entry version 15.
DE Insulin-like-growth factor 2 preproprotein (Fragment).
GN Name=IGF2;
OS Sus scrofa (Pig).
OC Eukaryota; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Suidae;
OC Sus.
OC NCBI_TaxID=9823;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RX MEDLINE=2215958; PubMed=12140686; DOI=10.1007/s00335-001-3059-x;
RA Amarger V., Nguyen M., Van Laere A.-S., Brunschweiler M., Nezer C.,
RA Georges M., Anderson L.;
RT "Comparative sequence analysis of the INS-IGF2-H19 gene cluster in
RT pigs.";
RL Mamm. Genome 13:388-398(2002).
CC -1- SUBCELLULAR LOCATION: Secreted (By similarity).
CC -1- SIMILARITY: Belongs to the insulin family.
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CC Distributed under the Creative Commons Attribution-NoDerivs license
CC EMBL: AF466299; AAM83400.1; -; mRNA.
CC HSSP: P01344; 1IGL.
CC SMR: Q8MJT5; 25-91.
CC GO: GO:0005576; C:extracellular region; IEA.
CC GO: GO:0005179; F:hormone activity; IEA.

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DR GO: GO:0018445; F:prothoracicotropic hormone activity; IEA.
DR GO: GO:007582; P:physiological process; IEA.
DR InterPro: IPR004824; Bombyxin.
DR InterPro: IPR004825; Ins/IGF/relax.
DR InterPro: IPR003234; Insulin-like.
DR Pfam: PF00049; Insulin; 1.
DR PRINTS: PR00276; INSULIN.
DR PRINTS: PR00277; INSULIN.
DR ProDom: PD001048; Bombyxin; 1.
DR ProDom: PD015667; MolIusc_ins; 1.
DR SMART: SM00078; IIGF; 1.
DR PROSITE: PS00262; INSULIN; 1.
DR NON TER 123 123
SQ SEQUENCE 123 AA; 13876 MW; A0783AF5D9B89338 CRC64;

Query Match
Best local Similarity 88.0%; Score 168; DB 2; Length 123;
Matches 29; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 DVSTPPTVLPDNFPRYPVGKFFQYDPTWKOS 30
Db 93 DVSTPPTVLPDNFPRYPVGKFFRYDTWKOS 122

RESULT 5
IGF2_CAVPO STANDARD; PRT; 128 AA.
ID IGF2_CAVPO
AC O08279;
DT 01-FEB-1995, integrated into UniProtKB/Swiss-Prot.
DT 01-FEB-1995, sequence version 1.
DT 07-FEB-2006, entry version 41.
DE Insulin-like growth factor II precursor (IGF-II) (Somatomedin A)
DE (Fragment).
GN Name=IGF2;
OS Cavia porcellus (Guinea pig).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia;
OC Hystricognathi; Caviidae; Cavia.
OC NCBI_TaxID=10141;
RN [1]
RP NUCLEOTIDE SEQUENCE [MRNA].
RX STRAIN=Hartley; TISSUE=Liver;
RX MEDLINE=93246007; PubMed=1301379; DOI=10.1016/0303-7207(92)90216-S;
RA Levinovitz A., Norstedt G., van den Berg S., Robinson I.C.A.F.,
RA Ekstrom T.O.;
RT "Isolation of an insulin-like growth factor II cDNA from guinea pig
RT liver: expression and developmental regulation.";
RL Mol. Cell. Endocrinol. 89:105-110(1992).
CC -1- FUNCTION: The insulin-like growth factors possess growth-promoting
CC activity. In vitro, they are potent mitogens for cultured cells.
CC IGF-II is influenced by placental lactogen and may play a role in
CC fetal development.
CC -1- SUBCELLULAR LOCATION: Secreted protein.
CC -1- DEVELOPMENTAL STAGE: Expressed predominantly in fetal tissues and
CC at lower levels in adult.
CC -1- SIMILARITY: Belongs to the insulin family.
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CC EMBL: S59899; AAB26479.1; -; mRNA.
CC PIR: I57671; I57671.
CC HSSP: P01344; 1IGL.
CC SMR: Q08279; 25-91.
CC InterPro: IPR004824; Bombyxin.
CC InterPro: IPR004825; Ins/IGF/relax.
CC Pfam: PF00049; Insulin; 1.
CC PRINTS: PR00277; INSULIN.
CC ProDom: PD001048; Bombyxin; 1.
CC SMART: SM00078; IIGF; 1.
CC PROSITE: PS00262; INSULIN; 1.
CC Growth factor; Mitogen; Signal.
FT SIGNAL 1 24 By similarity.

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QY	Query Match	Similarity	Score	DB 2	Length	115
Best Local	80.1%	Pred. No. 5e-13				
Matches	28	Conservative	2	Mismatches	4	Indels
						Gaps
1	DVSTPPTVLPDNFRRYPVGKFFQYDTWKQSTQRL	34				
55	DVSTPPTVLPDSDSPRYPVVKLFQYNAMKQSTQRL	88				

Query Match Similarity	80.1%	Score 153;	DB 1;	Length 181;
Best Local Similarity	82.4%	Pred. No. 8,4e-13;		
Matches 28; Conservative	2;	Mismatches 4;	Indels 0;	Gaps 0;

QY 1 DVSTPPTVLPDNFPKRYPVGKFFQYDTWKQSTORL 34  
 DB 93 DVSTPPTVLPDNFPKRYPVGKFFQYDTWKQSTORL 126

RESULT 8  
 IGF2\_MOUSE STANDARD; PRT; 180 AA.  
 AC P09535;  
 DT 01-JUL-1989, integrated into UniProtKB/Swiss-Prot.  
 DT 01-JUL-1989, sequence version 1.  
 DT 07-FEB-2006, entry version 57.  
 DE Insulin-like growth factor II precursor (Multiplication-stimulating  
 DE polypeptide) (IGF-II).  
 GN Name=Igf2; Synonyms=Igf-2;  
 OS Mus musculus (Mouse).  
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
 OC Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;  
 OC Muridae; Muridae; Murinae; Mus.  
 OC NCBI\_TaxID=10090;  
 RN [1]  
 RP NUCLEOTIDE SEQUENCE.  
 RX MEDLINE=87053171; PubMed=3780370;  
 RT Stempien M.M., Fong N.M., Rall L.B., Bell G.I.;  
 RT "Sequence of a placental cDNA encoding the mouse insulin-like growth  
 RT factor II precursor.";  
 RT DNA 5:357-361(1986).  
 RL [2]  
 RP NUCLEOTIDE SEQUENCE.  
 RX MEDLINE=91090843; PubMed=1702294;  
 RT Rotwein P., Hall L.J.;  
 RT "Evolution of insulin-like growth factor II: characterization of the  
 RT mouse IGF-II gene and identification of two pseudo-exons.";  
 RT DNA Cell Biol. 9:725-735(1990).  
 RL [3]  
 RP NUCLEOTIDE SEQUENCE.  
 RX MEDLINE=97191545; PubMed=9035903; DOI=10.1093/dnares/3.5.331;  
 RA Sasaki H., Shimozaki K., Zubair M., Aoki N., Hatano N., Moore T.,  
 RA Feil R., Constancia M., Reik W., Rotwein P.;  
 RT "Nucleotide sequence of a 28-kb mouse genomic region comprising the  
 RT imprinted Igf2 gene.";  
 RT DNA Res. 3:331-335(1996).  
 RL [4]  
 RP NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA].  
 RC STRAIN=C57BL/6J; TISSUE=Embryo;  
 RX MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;  
 RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,  
 RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,  
 RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,  
 RA Hopkins R.F., Jordan H., Moore T., Max S.T., Wang J., Haieh F.,  
 RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,  
 RA Stapleton M., Soares M.B., Bonaldi M.F., Casavant T.L., Scheetz T.E.,  
 RA Brownstein M.J., Udell T.B., Toshiyuki S., Carninci P., Prange C.,  
 RA Raha S.S., Loughran N.A., Peters G.J., Abramson R.D., Mullaly S.J.,  
 RA Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,  
 RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulik S.W.,  
 RA Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,  
 RA Fahey J., Helton E., Kettelman M., Madan A., Rodriguez S., Sanchez A.,  
 RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,  
 RA Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,  
 RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,  
 RA Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smalins D.E.,  
 RA Scherch A., Schein J.E., Jones S.J.W., Marra W.A.;  
 RT "Generation and initial analysis of more than 15,000 full-length human  
 RT and mouse cDNA sequences.";  
 RT Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).  
 RL [5]  
 RP NUCLEOTIDE SEQUENCE OF 1-52.  
 RX MEDLINE=89160812; PubMed=2537977;  
 RA Tolliesen S.E., Sadow J.L., Rotwein P.;  
 RT "Coordinate expression of insulin-like growth factor II and its  
 RT receptor during muscle differentiation.";

RL Proc. Natl. Acad. Sci. U.S.A. 86:1543-1547(1989).  
 RN [6]  
 RP NUCLEOTIDE SEQUENCE OF 1-52 AND 103-180.  
 RC STRAIN=BALB/c; TISSUE=Spleen;  
 RX MEDLINE=94089965; PubMed=8265819; DOI=10.1016/0167-0115(93)90337-8;  
 RA Holtuijzen P.E., Cleutjens C.B., Veenstra G.J., van der Lee F.M.,  
 RA Koonen-Reemst A.M., Sussenbach J.S.;  
 RT "Differential expression of the human, mouse and rat IGF-II genes.";  
 RT Regul. Pept. 48:77-89(1993).  
 RL [7]  
 RP NUCLEOTIDE SEQUENCE OF 1-52 AND 103-180.  
 CC -1- FUNCTION: The insulin-like growth factors possess growth-promoting  
 CC activity. In vitro, they are potent mitogens for cultured cells.  
 CC IGF-II is influenced by placental lactogen and may play a role in  
 CC fetal development.  
 CC -1- SUBCELLULAR LOCATION: Secreted protein.  
 CC -1- DEVELOPMENTAL STAGE: Low levels of expression during myoblast  
 CC proliferation. Levels rise rapidly during myoblast differentiation  
 CC and then decrease.  
 CC -1- SIMILARITY: Belongs to the insulin family.  
 CC -----  
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 CC -----

DR EMBL, M14951; AAA37683.1; -; mRNA.  
 DR EMBL, M36332; AAA37926.1; -; Genomic\_DNA.  
 DR EMBL, M36331; AAA37926.1; JOINED; Genomic\_DNA.  
 DR EMBL, U71085; AAC53516.1; -; Genomic\_DNA.  
 DR EMBL, BC053489; AAH53489.1; -; mRNA.  
 DR EMBL, M24633; AAA37923.1; -; Genomic\_DNA.  
 DR EMBL, X71921; CAA50737.1; -; Genomic\_DNA.  
 DR EMBL, X71922; CAA50738.1; -; Genomic\_DNA.  
 DR PIR, A24913; A24913.  
 DR HSSP, P01344; 1IGF.  
 DR SMR, P09535; 25-91.  
 DR EMBL, ENSMUSG00000048583; Mus musculus.  
 DR MGI, MGI:96434; Igf2.  
 DR GO, GO:0005615; Extracellular space; TAS.  
 DR GO, GO:0005159; F:insulin-like growth factor receptor binding; IPI.  
 DR GO, GO:0005515; F:protein binding; IPI.  
 DR GO, GO:0009887; P:organogenesis; IMP.  
 DR InterPro, IPR004824; Bombyxin.  
 DR InterPro, IPR004825; Ins/IGF-relax.  
 DR Pfam, PF00049; Insulin; 1.  
 DR PRINTS, PR00277; INSULINB.  
 DR ProDom, PD01048; Bombyxin; 1.  
 DR SMART, SM00078; IIGF.1.  
 DR PROSITE, PS00262; INSULIN; 1.  
 KW Growth factor; Mitogen; Signal.  
 FT SIGNAL 1 24  
 FT CHAIN 1 91  
 FT PROPEP 92 180  
 FT REGION 25 52  
 FT REGION 53 64  
 FT REGION 65 85  
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 FT DISULFID 33 71  
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QY 1 DVSTPPTVLPDNFPKRYPVGKFFQYDTWKQSTORL 34  
 DB 93 DVSTQAVLDPDPRRYPVGKFFQYDTWKQSTORL 126

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 ID Q2IDG5\_MU5SP

OC Rattus norvegicus (Rat).  
OC Eukaryote; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
OC Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;  
OC Microidea; Muridae; Murinae; Rattus.  
OX NCBI\_TaxId=10116;  
RN [1]  
RP NUCLEOTIDE SEQUENCE.  
RA Reehler M.M., Bruni C.B., Whitfield H.J., Yang Y.W.-H., Frunzio R.,  
RA Graham D.E., Colligan J.E., Terrell J.E., Acquaviva A.M., Nisley S.P.,  
RT "Characterization of the biosynthetic precursor for rat insulin-like  
RT growth factor II by bioanalytic labeling, radiosequencing, and  
RT nucleotide sequence analysis of a cDNA clone.";  
RL Cancer Cells 3:131-138(1985).  
CC -1 SUBCELLULAR LOCATION: Secreted (By similarity).  
CC -1 SIMILARITY: Belongs to the insulin family.  
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DR EMBL, M36868; AAA41433.1; -, mRNA.  
DR HSSP, P01344; 1IGL.  
DR KSP; Q63265; 1-65.  
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DR GO: GO:0005179; F:hormone activity; IEA.  
DR GO: GO:0007582; P:physiological process; IEA.  
DR InterPro: IPR004825; Ins/IGF/Relax.  
DR InterPro: IPR003234; Insulin-like.  
DR Pfam: PF00049; Insulin\_1.  
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DR ProDom: PD015667; Molusc\_ins; 1.  
DR SMART: SM00078; IIGF; 1.  
DR PROSITE: PS00262; INSULIN; 1.  
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DT 01-JUL-1989, integrated into UniProtKB/Swiss-Prot.  
DT 01-OCT-1989, sequence version 2.  
DT 07-FEB-2006, entry version 51.  
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OX NCBI\_TaxId=9940;  
RX MEDLINE=9345107; PubMed=2762134;  
O'Mahoney J.V., Adams T.E.;  
RT "Nucleotide sequence of an ovine insulin-like growth factor-II cDNA."  
RL Nucleic Acids Res. 17:5392-5392(1989).  
RN [2]  
RP NUCLEOTIDE SEQUENCE.  
RA Brown W.M., Dziegielewska K.M., Foreman R.C., Saunders N.R.;  
RA MEDLINE=90356421; PubMed=2388846;  
RT "The nucleotide and deduced amino acid sequences of insulin-like  
RT growth factor II cDNAs from adult bovine and fetal sheep liver."  
RL Nucleic Acids Res. 18:4614-4614(1990).

RN [3]  
 RP NUCLEOTIDE SEQUENCE.  
 RC STRAIN=Cocpworth; TISSUE=Liver;  
 RX MEDLINE=93250051; PubMed=8485157; DOI=10.1016/0167-4781(93)90246-A;  
 RA Demmer J., Hill D.F., Petersen G.B.;  
 RT "Characterization of two sheep insulin-like growth factor II cDNAs with different 5'-untranslated regions";  
 RL Biochim. Biophys. Acta 1173:79-80(1993).  
 RN [4]  
 RP NUCLEOTIDE SEQUENCE.  
 RC TISSUE=Liver;  
 RA Ohlsen S.M., Wong E.A.;  
 RN Submitted (SEP-1990) to the EMBL/GenBank/DBJ databases.  
 RN [5]  
 RP PROTEIN SEQUENCE OF 25-91.  
 RX MEDLINE=89136887; PubMed=2537174;  
 RA Francis G.L., McNeil K.A., Wallace J.C., Ballard F.J., Owens P.C.;  
 RT "Sheep insulin-like growth factors I and II: sequences, activities and assays.";  
 RL Endocrinology 124:1173-1183(1989).  
 RN [6]  
 RP PROTEIN SEQUENCE OF 25-58.  
 RX MEDLINE=89323215; PubMed=2752053; DOI=10.1016/0167-4838(89)90131-3;  
 RA Hey A.W., Browne C.A., Simpson R.J., Thorburn G.D.;  
 RT "Simultaneous isolation of insulin-like growth factors I and II from adult sheep serum.";  
 RL Biochim. Biophys. Acta 997:27-35(1989).  
 CC -1- FUNCTION: The insulin-like growth factors possess growth-promoting activity. In vitro, they are potent mitogens for cultured cells. IGF-II is influenced by placental lactogen and may play a role in fetal development.  
 CC -1- SUBCELLULAR LOCATION: Secreted protein.  
 CC -1- SIMILARITY: Belongs to the insulin family.  
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 CC -----  
 DR EMBL, U00668; AAB60626.1; -; Genomic DNA.  
 DR EMBL, U00666; AAB60626.1; JOINED; Genomic DNA.  
 DR EMBL, U00667; AAB60626.1; JOINED; Genomic DNA.  
 DR EMBL, X15248; CAA33324.1; -; mRNA.  
 DR EMBL, X35554; CAA37621.1; -; mRNA.  
 DR EMBL, M89788; AAA31548.1; -; mRNA.  
 DR EMBL, M89789; AAA31548.1; -; mRNA.  
 DR EMBL, X55638; CAA39163.1; -; mRNA.  
 DR PIR, S04858; S04858.  
 DR HSSP, P01344; 1IGL.  
 DR SMR, P01344; 25-91.  
 DR InterPro: IPR004825; Ins/IGF/relax.  
 DR Pfam: PF00069; Insulin\_1.  
 DR PRINTS, PRO0277; INSULIN.  
 DR SMART, SM00078; IIGF, 1.  
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 FT REGION 25 52 B.  
 FT REGION 53 64 /FTId=PRO\_0000015732.  
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 FT REGION 86 91 D.  
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 FT DISULFID 45 84 By similarity.  
 FT DISULFID 70 75 By similarity.  
 FT CONFLICT 46 47 GD -> DG (in Ref. 5).  
 SQ SEQUENCE 179 AA; 19616 MM; 7B369AEB7F2BA478 CRC64;  
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 Best Local Similarity 79.4%; Pred. No. 2,8e-11;  
 Matches 27; Conservative 1; Mismatches 6; Indels 0; Gaps 0;

QY 1 DYSTPEPTLVLDNFPFPGKFFQYDPTWKQSTORL 34  
 Db 93 DVASATTVLPDDFTAYPVGKFFQSDTWKQSTORL 126  
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 DT 21-0UL-1986, integrated into UniProtKB/Swiss-Prot.  
 DT 20-MAR-1987, sequence version 1.  
 DT 07-FEB-2006, entry version 59.  
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 GN Name=Igf2; Synonyms=Igf-2;  
 OS Rattus norvegicus (Rat).  
 OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;  
 OC Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;  
 OC Muridae; Muridae; Murinae; Rattus.  
 OX NCBI\_TaxID=10116;  
 RN [1]  
 RP NUCLEOTIDE SEQUENCE.  
 RC STRAIN=BRL-3A;  
 RX MEDLINE=84295593; PubMed=6382022;  
 RA Dull T.J., Gray A., Hayflick J.S., Ulrich A.;  
 RT "Insulin-like growth factor II precursor gene organization in relation to insulin gene family.";  
 RL Nature 310:777-781(1984).  
 RN [2]  
 RP NUCLEOTIDE SEQUENCE.  
 RC STRAIN=Buffalo;  
 RX MEDLINE=85215534; PubMed=3889836;  
 RA Soares M.B., Ishii D.N., Efstratiadis A.;  
 RT "Developmental and tissue-specific expression of a family of transcripts related to rat insulin-like growth factor II mRNA.";  
 RL Nucleic Acids Res. 13:1119-1134(1985);  
 RN [3]  
 RP NUCLEOTIDE SEQUENCE.  
 RX MEDLINE=87226166; PubMed=2438416;  
 RA Soares M.B., Turken A., Ishii D.N., Mills L., Episkopou V., Cotter S., Zeitlin S., Efstratiadis A.;  
 RT "Rat insulin-like growth factor II gene. A single gene with two promoters expressing a multitranscript family.";  
 RL J. Mol. Biol. 192:737-752(1986).  
 RN [4]  
 RP NUCLEOTIDE SEQUENCE.  
 RX MEDLINE=87057436; PubMed=3023363;  
 RA Frunzio R., Chiariotti L., Brown A.L., Graham D.E., Rechler M.M., Bruni C.B.;  
 RT "Structure and expression of the rat insulin-like growth factor II (rIGF-II) gene. rIGF-II RNAs are transcribed from two promoters.";  
 RL J. Biol. Chem. 261:17138-17149(1986).  
 RN [5]  
 RP NUCLEOTIDE SEQUENCE.  
 RX MEDLINE=89000793; PubMed=3167060; DOI=10.1016/0167-4781(89)90138-8;  
 RA Ueno T., Takahashi K., Matsuguchi T., Endo H., Yamamoto M.;  
 RT "Transcriptional deviation of the rat insulin-like growth factor II gene initiated at three alternative leader-exons between neonatal tissues and ascites hepatomas";  
 RL Biochim. Biophys. Acta 950:411-419(1988).  
 RN [6]  
 RP NUCLEOTIDE SEQUENCE OF 62-180.  
 RX MEDLINE=85061532; PubMed=6390212;  
 RA Whitfield H.J., Bruni C.B., Frunzio R., Terrell J.E., Nisley S.P., Rechler M.M.;  
 RT "Isolation of a cDNA clone encoding rat insulin-like growth factor-II precursor";  
 RL Nature 312:277-280(1984).  
 RN [7]  
 RP NUCLEOTIDE SEQUENCE OF 103-180.  
 RX MEDLINE=89127259; PubMed=3221878;  
 RA Chiariotti L., Brown A.L., Frunzio R., Clemmons D.R., Rechler M.M., Bruni C.B.;

Query Match	74.3%	Score 142	DB 1	Length 180
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DB	93	DVSTSQAVLPDDFPRYPYGVKGFKEFTVQSQAGRL	126

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CC -!- SUBCELLULAR LOCATION: Secreted (By similarity).
CC -!- SIMILARITY: Belongs to the insulin family.
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CC Distributed under the Creative Commons Attribution-NonDerivs license
CC -----
DR EMBL; AF152589; AAF73228.1; -; mRNA.
DR HSSP; P01344; IIGL.
DR SMR; Q9N1S5; 1-51.
DR GO; GO:0005576; C:extracellular region; IEA.
DR GO; GO:0005179; F:hormone activity; IEA.
DR GO; GO:007582; P:physiological process; IEA.
DR InterPro; IPR004825; Ins/IGF/relax.
DR Pfam; PF00049; Insulin; 1.
DR PRINTS; PR00276; INSULINA.
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Search completed: May 21, 2006, 12:45:47  
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OM protein - protein search, using sw model

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96.001 Million cell updates/sec

Title: US-10-632-366-1

Perfect score: 191

Sequence: 1 DVSTPPTVLPDNFPRYPVGFQYDTWKSTORL 34

Scoring table:

BLOSUM62

Searched: 650591 seqs, 87530628 residues

Total number of hits satisfying chosen parameters: 650591

Minimum DB seq length: 0  
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Post-processing: Maximum Match 0%

Listing first 45 summaries

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1: Issued Patents NA:  
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Pred. No. is the number of results predicted by chance to have a  
score greater than or equal to the score of the result being printed,  
and is derived by analysis of the total score distribution.

#### SUMMARIES

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2	191	100.0	35	2	US-09-657-276-381
3	191	100.0	155	2	US-08-950-720A-10
4	191	100.0	156	2	US-09-428-226A-7
5	191	100.0	156	2	US-09-972-809-7
6	191	100.0	156	2	US-09-972-809-7
7	191	100.0	180	1	US-07-953-230A-12
8	191	100.0	180	2	US-09-617-389B-19
9	191	100.0	180	7	5405942-4
10	90	47.1	16	2	US-09-623-548A-380
11	90	47.1	16	2	US-09-657-276-380
12	84	44.0	16	2	US-10-360-101-185
13	62.5	32.7	148	2	US-09-248-196A-17232
14	53	27.7	261	2	US-09-489-039A-11728
15	51	26.7	1571	2	US-08-956-991-11
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17	50.5	26.4	667	2	US-09-248-196A-12880
18	50	26.2	550	2	US-09-198-452A-225
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22	49.5	25.9	522	2	US-09-107-433-3066
23	49	25.7	183	2	US-09-134-001C-4145
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25	48	25.1	97	2	US-09-489-039A-12954
26	48	25.1	286	2	US-09-662-254B-12

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28	48	25.1	478	1	US-09-165-234-7	Sequence 7, Appl
29	48	25.1	478	1	US-09-274-570-7	Sequence 7, Appl
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31	48	25.1	2289	2	US-09-051-019-2	Sequence 2, Appl
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35	47.5	24.9	1334	2	US-09-328-352-5736	Sequence 5736, Ap
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37	47.5	24.9	302	2	US-10-094-749-1923	Sequence 1923, Ap
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40	47.5	24.9	473	1	US-09-460-421-17	Sequence 17, Appl
41	47.5	24.9	473	5	PCT-US94-06365-6	Sequence 6, Appl
42	47.5	24.9	512	3	US-10-114-270-140	Sequence 140, App
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44	47.5	24.9	563	2	US-09-602-787A-290	Sequence 290, App
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#### ALIGNMENTS

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RESULT 1
US-09-623-548A-381
Sequence 381, Application US/09623548A
Patent No. 6849714
GENERAL INFORMATION:
APPLICANT: Conjuchem, Inc.
APPLICANT: Bridon, Dominique
APPLICANT: Ezrin, Alan
APPLICANT: Milner, Peter
APPLICANT: Holmes, Darren
APPLICANT: Thibaudau, Karen
TITLE OF INVENTION: PROTECTION OF ENDOGENOUS THERAPEUTIC PEPTIDES FROM
TITLE OF INVENTION: PEPTIDASE ACTIVITY THROUGH CONJUGATION TO BLOOD
TITLE OF INVENTION: COMPONENTS
FILE REFERENCE: 2110
CURRENT APPLICATION NUMBER: US/09/623,548A
CURRENT FILING DATE: 2000-09-05
PRIOR APPLICATION NUMBER: 60/134,406
PRIOR FILING DATE: 1999-05-17
PRIOR APPLICATION NUMBER: 60/153,406
PRIOR FILING DATE: 1999-09-10
PRIOR APPLICATION NUMBER: 60/159,783
PRIOR FILING DATE: 1999-10-18
NUMBER OF SEQ ID NOS: 1617
SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 381
LENGTH: 35
TYPE: PRT
ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: Description of Artificial Sequence: Synthetic
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US-09-623-548A-381

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Best Local Similarity 100.0%; Pred. No. 1.4e-20;
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Db 2 DVSTPPTVLPDNFPRYPVGFQYDTWKSTORL 35

RESULT 2
US-09-657-276-381
Sequence 381, Application US/09657276
Patent No. 6887470
GENERAL INFORMATION:
APPLICANT: Conjuchem, Inc.
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/ APPLICANT: Bridon, Dominique
/ APPLICANT: Ezrin, Alan
/ APPLICANT: Milner, Peter
/ APPLICANT: Holmes, Darren
/ APPLICANT: Thibaudau, Karen
/ TITLE OF INVENTION: PROTECTION OF ENDOGENOUS THERAPEUTIC PEPTIDES FROM
/ TITLE OF INVENTION: PEPTIDASE ACTIVITY THROUGH CONJUGATION TO BLOOD
/ FILE REFERENCE: 2110
/ CURRENT APPLICATION NUMBER: US/09/657,276
/ PRIOR FILING DATE: 2000-09-07
/ PRIOR APPLICATION NUMBER: 60/134,406
/ PRIOR FILING DATE: 1999-05-17
/ PRIOR APPLICATION NUMBER: 60/153,406
/ PRIOR FILING DATE: 1999-09-10
/ PRIOR APPLICATION NUMBER: 60/159,783
/ PRIOR FILING DATE: 1999-10-18
/ NUMBER OF SEQ ID NOS: 1617
/ SOFTWARE: Patentln Ver. 2.1
/ SEQ ID NO 381
/ LENGTH: 35
/ TYPE: PRT
/ ORGANISM: Artificial Sequence
/ FEATURE:
/ OTHER INFORMATION: Description of Artificial Sequence: Synthetic
/ US-09-657-276-381

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RESULT 3
US-08-950-720A-10
/ Sequence 10, Application US/08950720A
/ Patent No. 6046028
/ GENERAL INFORMATION:
/ APPLICANT: Conklin, Darrell C.
/ APPLICANT: Lofton-Day, Catherine E.
/ APPLICANT: Lok, Si
/ APPLICANT: Jaspers, Stephen R.
/ TITLE OF INVENTION: INSULIN HOMOLOG
/ NUMBER OF SEQUENCES: 17
/ CORRESPONDENCE ADDRESS:
/ ADDRESSEE: ZymoGenetics, Inc.
/ STREET: 1201 Eastlake Avenue East
/ CITY: Seattle
/ STATE: WA
/ COUNTRY: USA
/ ZIP: 98102
/ COMPUTER READABLE FORM:
/ MEDIUM TYPE: Diskette
/ COMPUTER: IBM compatible
/ OPERATING SYSTEM: DOS
/ SOFTWARE: FastSeq for Windows Version 2.0
/ CURRENT APPLICATION DATA:
/ APPLICATION NUMBER: US/08/950,720A
/ FILING DATE:
/ CLASSIFICATION: 435
/ PRIOR APPLICATION DATA:
/ APPLICATION NUMBER:
/ FILING DATE:
/ ATTORNEY/AGENT INFORMATION:
/ NAME: Sawislak, Deborah A.
/ REGISTRATION NUMBER: 37,438
/ REFERENCE/DOCKET NUMBER: 96-09
/ TELECOMMUNICATION INFORMATION:
/ TELEPHONE: 206-442-6672
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/ TELEFAX: 206-442-6678
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/ INFORMATION FOR SEQ ID NO: 10:
/ SEQUENCE CHARACTERISTICS:
/ LENGTH: 155 amino acids
/ TYPE: amino acid
/ STRANDEDNESS: single
/ TOPOLOGY: linear
/ MOLECULE TYPE: No. 6046028e
/ US-08-950-720A-10

Query Match          100.0%; Score 191; DB 2; Length 155;
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RESULT 4
US-09-428-226A-7
/ Sequence 7, Application US/09428226A
/ Patent No. 6548482
/ GENERAL INFORMATION:
/ APPLICANT: Sundee, Khosla
/ APPLICANT: Conover, Cheryl A.
/ TITLE OF INVENTION: TREATMENT OF OSTEOPOROSIS
/ FILE REFERENCE: 07039/183001
/ CURRENT APPLICATION NUMBER: US/09/428,226A
/ CURRENT FILING DATE: 1999-10-27
/ PRIOR APPLICATION NUMBER: 09/073,032
/ PRIOR FILING DATE: 1998-05-05
/ PRIOR APPLICATION NUMBER: 60/045,607
/ PRIOR FILING DATE: 1997-05-05
/ NUMBER OF SEQ ID NOS: 7
/ SOFTWARE: FastSeq for Windows Version 4.0
/ SEQ ID NO 7
/ LENGTH: 156
/ TYPE: PRT
/ ORGANISM: Homo sapiens
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QY      1 DVSTPPTVLPDNFPKRYVGVKFFQYDTWKQSTQRL 34
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        69 DVSTPPTVLPDNFPKRYVGVKFFQYDTWKQSTQRL 102

Db

RESULT 5
US-09-972-809-7
/ Sequence 7, Application US/09972809
/ Patent No. 6693084
/ GENERAL INFORMATION:
/ APPLICANT: Sundee, Khosla
/ APPLICANT: Conover, Cheryl A.
/ TITLE OF INVENTION: TREATMENT OF OSTEOPOROSIS
/ FILE REFERENCE: 07039/183001
/ CURRENT APPLICATION NUMBER: US/09/972,809
/ CURRENT FILING DATE: 2001-10-05
/ PRIOR APPLICATION NUMBER: 09/428,226
/ PRIOR FILING DATE: 1999-10-27
/ PRIOR APPLICATION NUMBER: 60/045,607
/ PRIOR FILING DATE: 1997-05-05
/ NUMBER OF SEQ ID NOS: 7
/ SOFTWARE: FastSeq for Windows Version 4.0
/ SEQ ID NO 7
/ LENGTH: 156
/ TYPE: PRT
/ ORGANISM: Homo sapiens
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US-09-972-809-7

Query Match 100.0%; Score 191; DB 2; Length 156;

Best Local Similarity 100.0%; Pred. No. 7.2e-20;

Matches 34; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 DVSTPPTVLPDNFPRYPVGKFFQYDTWKSTORL 34  
69 DVSTPPTVLPDNFPRYPVGKFFQYDTWKSTORL 102

RESULT 6

US-09-972-809-7

Sequence 7, Application US/09972809

Patent No. 6916790

GENERAL INFORMATION:

APPLICANT: Sundeeep, Khosla

APPLICANT: Conover, Cheryl A.

TITLE OF INVENTION: TREATMENT OF OSTEOPOROSIS

FILE REFERENCE: 07039/183001

CURRENT APPLICATION NUMBER: US/09/972,809

PRIOR APPLICATION NUMBER: 09/428,226

PRIOR FILING DATE: 1999-10-27

PRIOR APPLICATION NUMBER: 60/045,607

PRIOR FILING DATE: 1997-05-05

NUMBER OF SEQ ID NOS: 7

SOFTWARE: FastSeq for Windows Version 4.0

SEQ ID NO 7

LENGTH: 156

TYPE: PRT

ORGANISM: Homo sapiens

US-09-972-809-7

QY

1 DVSTPPTVLPDNFPRYPVGKFFQYDTWKSTORL 34

69 DVSTPPTVLPDNFPRYPVGKFFQYDTWKSTORL 102

RESULT 7

US-07-953-230A-12

Sequence 12, Application US/07953230A

Patent No. 5476779

GENERAL INFORMATION:

APPLICANT: CHEN, Thomas T

TITLE OF INVENTION: INSULIN-LIKE GROWTH FACTORS ISOLATED

TITLE OF INVENTION: FROM RAINBOW TROUT

NUMBER OF SEQUENCES: 12

CORRESPONDENCE ADDRESS:

ADDRESSER: Burns, Doane, Swecker &amp; Mathis

STREET: George Mason Bldg., Washington &amp; Prince Sts.

CITY: Alexandria

STATE: Virginia

COUNTRY: United States

ZIP: 22313-1404

COMPUTER READABLE FORM:

MEDIUM TYPE: PC-DOS/MS-DOS

OPERATING SYSTEM: IBM PC compatible

SOFTWARE: Patent in Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/07/955,230A

FILING DATE: 30-SEP-1992

CLASSIFICATION: 435

ATTORNEY/AGENT INFORMATION:

NAME: Crane-Feury, Sharon E

REGISTRATION NUMBER: 36,113

REFERENCE/DOCKET NUMBER: 028755-010

TELECOMMUNICATION INFORMATION:

TELEPHONE: (703) 836-6620

INFORMATION FOR SEQ ID NO: 12:

SEQUENCE CHARACTERISTICS:

LENGTH: 180 amino acids

TYPE: amino acid

STRANDEDNESS: single

TOPOLOGY: linear

MOLECULE TYPE: protein

FEATURE:

NAME/KEY: Peptide

LOCATION: 57

OTHER INFORMATION: /note= "Gap of 1 after 57."

FEATURE:

NAME/KEY: Peptide

LOCATION: 59

OTHER INFORMATION: /note= "Gap of 1 after 59."

FEATURE:

NAME/KEY: Peptide

LOCATION: 63

OTHER INFORMATION: /note= "Gap of 2 after 63."

FEATURE:

NAME/KEY: Peptide

LOCATION: 85

OTHER INFORMATION: /note= "Gap of 2 after 85."

FEATURE:

NAME/KEY: Peptide

LOCATION: 96

OTHER INFORMATION: /note= "Gap of 3 after 96."

FEATURE:

NAME/KEY: Peptide

LOCATION: 97

OTHER INFORMATION: /note= "Gap of 8 after 97."

FEATURE:

NAME/KEY: Peptide

LOCATION: 119

OTHER INFORMATION: /note= "Gap of 1 after 119."

US-07-953-230A-12

QY

1 DVSTPPTVLPDNFPRYPVGKFFQYDTWKSTORL 34

93 DVSTPPTVLPDNFPRYPVGKFFQYDTWKSTORL 126

RESULT 8

US-09-617-389B-19

Sequence 19, Application US/09617389B

Patent No. 6709659

GENERAL INFORMATION:

APPLICANT: Lok, Si

APPLICANT: Conklin, Darrell C.

TITLE OF INVENTION: Antibodies That Bind Testis-Specific

TITLE OF INVENTION: Insulin Homolog Polypeptides

FILE REFERENCE: 96-06C3

CURRENT APPLICATION NUMBER: US/09/617,389B

CURRENT FILING DATE: 2000-07-17

PRIOR APPLICATION NUMBER: 09/339,148

PRIOR FILING DATE: 1999-06-24

PRIOR APPLICATION NUMBER: 08/905,267

PRIOR FILING DATE: 1997-01-18

PRIOR APPLICATION NUMBER: 60/023,213

PRIOR FILING DATE: 1996-02-08

PRIOR APPLICATION NUMBER: 60/031,592

PRIOR FILING DATE: 1996-11-21

NUMBER OF SEQ ID NOS: 24

SOFTWARE: FastSeq for Windows Version 3.0

SEQ ID NO 19

LENGTH: 180  
TYPE: PRT  
ORGANISM: Human  
US-09-617-389B-19

Query Match 100.0%; Score 191; DB 2; Length 180;  
Best Local Similarity 100.0%; Pred. No. 8.4e-20;  
Matches 34; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 DVSTPPTVLPDNFPRYPVGKFFQYDTWKSTQRL 34  
DB 93 DVSTPPTVLPDNFPRYPVGKFFQYDTWKSTQRL 126

RESULT 9  
5405942-4  
Patent No. 5405942  
APPLICANT: BELL, GRAEME I.; RALL, LESLIE B.; MERRYWEATHER,  
JAMES P.  
TITLE OF INVENTION: PREPRO INSULIN-LIKE GROWTH FACTORS  
I AND II  
NUMBER OF SEQUENCES: 16  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/07/65,673  
FILING DATE: 16-JUN-1987  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: 630,557  
FILING DATE: 19-JUL-1984  
SEQ ID NO: 4  
LENGTH: 180  
5405942-4

Query Match 100.0%; Score 191; DB 7; Length 180;  
Best Local Similarity 100.0%; Pred. No. 8.4e-20;  
Matches 34; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 DVSTPPTVLPDNFPRYPVGKFFQYDTWKSTQRL 34  
DB 93 DVSTPPTVLPDNFPRYPVGKFFQYDTWKSTQRL 126

RESULT 10  
US-09-623-548A-380  
Sequence 380, Application US/09623548A  
Patent No. 6849714  
GENERAL INFORMATION:  
APPLICANT: Conjuchem, Inc.  
APPLICANT: Bridon, Dominique  
APPLICANT: Ezrin, Alan  
APPLICANT: Milner, Peter  
APPLICANT: Holmes, Darren  
APPLICANT: Thibaudau, Karen  
TITLE OF INVENTION: PROTECTION OF ENDOGENOUS THERAPEUTIC PEPTIDES FROM  
TITLE OF INVENTION: PEPTIDASE ACTIVITY THROUGH CONJUGATION TO BLOOD  
TITLE OF INVENTION: COMPONENTS  
FILE REFERENCE: 2110  
CURRENT APPLICATION NUMBER: US/09/623,548A  
CURRENT FILING DATE: 2000-09-05  
PRIOR APPLICATION NUMBER: 60/134,406  
PRIOR FILING DATE: 1999-05-17  
PRIOR FILING DATE: 1999-09-10  
PRIOR FILING DATE: 1999-09-10  
PRIOR APPLICATION NUMBER: 60/153,406  
PRIOR APPLICATION NUMBER: 60/159,783  
PRIOR FILING DATE: 1999-10-18  
NUMBER OF SEQ ID NOS: 1617  
SOFTWARE: PatentIn Ver. 2.1  
SEQ ID NO 380  
LENGTH: 16  
TYPE: PRT  
ORGANISM: Artificial Sequence  
FEATURE:  
OTHER INFORMATION: Description of Artificial Sequence: Synthetic  
OTHER INFORMATION: Peptide

US-09-623-548A-380

Query Match 47.1%; Score 90; DB 2; Length 16;  
Best Local Similarity 100.0%; Pred. No. 2.1e-06;  
Matches 16; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 DVSTPPTVLPDNFPRY 16  
DB 1 DVSTPPTVLPDNFPRY 16

RESULT 11  
US-09-657-276-380  
Sequence 380, Application US/09657276  
Patent No. 6887470  
GENERAL INFORMATION:  
APPLICANT: Conjuchem, Inc.  
APPLICANT: Bridon, Dominique  
APPLICANT: Ezrin, Alan  
APPLICANT: Milner, Peter  
APPLICANT: Holmes, Darren  
APPLICANT: Thibaudau, Karen  
TITLE OF INVENTION: PROTECTION OF ENDOGENOUS THERAPEUTIC PEPTIDES FROM  
TITLE OF INVENTION: PEPTIDASE ACTIVITY THROUGH CONJUGATION TO BLOOD  
TITLE OF INVENTION: COMPONENTS  
FILE REFERENCE: 2110  
CURRENT APPLICATION NUMBER: US/09/657,276  
CURRENT FILING DATE: 2000-09-07  
PRIOR APPLICATION NUMBER: 60/134,406  
PRIOR FILING DATE: 1999-05-17  
PRIOR APPLICATION NUMBER: 60/153,406  
PRIOR FILING DATE: 1999-09-10  
PRIOR APPLICATION NUMBER: 60/159,783  
PRIOR FILING DATE: 1999-10-18  
NUMBER OF SEQ ID NOS: 1617  
SOFTWARE: PatentIn Ver. 2.1  
SEQ ID NO 380  
LENGTH: 16  
TYPE: PRT  
ORGANISM: Artificial Sequence  
FEATURE:  
OTHER INFORMATION: Description of Artificial Sequence: Synthetic  
OTHER INFORMATION: Peptide  
US-09-657-276-380

Query Match 47.1%; Score 90; DB 2; Length 16;  
Best Local Similarity 100.0%; Pred. No. 2.1e-06;  
Matches 16; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 DVSTPPTVLPDNFPRY 16  
DB 1 DVSTPPTVLPDNFPRY 16

RESULT 12  
US-10-360-101-185  
Sequence 185, Application US/10360101  
Patent No. 6861236  
GENERAL INFORMATION:  
APPLICANT: Mol1, Gert N.  
APPLICANT: Leenhouts, Cornelis J.  
TITLE OF INVENTION: Export and modification of (poly)peptide in the lantibiotic way  
FILE REFERENCE: 2183-5673  
CURRENT APPLICATION NUMBER: US/10/360,101  
CURRENT FILING DATE: 2003-02-07  
PRIOR APPLICATION NUMBER: EP 02077060.8  
PRIOR FILING DATE: 2002-05-24  
NUMBER OF SEQ ID NOS: 309  
SOFTWARE: PatentIn version 3.1  
SEQ ID NO 185  
LENGTH: 16  
TYPE: PRT  
ORGANISM: Artificial Sequence



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GenCore version 5.1.8  
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OM protein - protein search, using sw model

Run on: May 21, 2006, 12:47:06 ; Search time 103 Seconds  
(without alignments)  
152.906 Million cell updates/sec

Title: US-10-632-366-1

Sequence: 1 DVSTPPTVLPDNFPRYPVGKFFQYDTWKSTORL 34

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Gap 10.0 , Gapext 0.5

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Total number of hits satisfying chosen parameters: 2097797

Minimum DB seq length: 0  
Maximum DB seq length: 2000000000

Post-processing: Maximum Match 0%  
Maximum Match 100%

Listing first 45 summaries

Database :

Published Applications AA Main:\*

- 1: /EMC\_Celerra\_SIDS3/ProdData/2/pubppaa/US07\_PUBCOMB.pep:\*
- 2: /EMC\_Celerra\_SIDS3/ProdData/2/pubppaa/US08\_PUBCOMB.pep:\*
- 3: /EMC\_Celerra\_SIDS3/ProdData/2/pubppaa/US09\_PUBCOMB.pep:\*
- 4: /EMC\_Celerra\_SIDS3/ProdData/2/pubppaa/US10\_PUBCOMB.pep:\*
- 5: /EMC\_Celerra\_SIDS3/ProdData/2/pubppaa/US10B\_PUBCOMB.pep:\*
- 6: /EMC\_Celerra\_SIDS3/ProdData/2/pubppaa/US11\_PUBCOMB.pep:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

#### SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	191	100.0	34	3	US-09-745-078A-2
2	191	100.0	34	4	US-10-374-624-2
3	191	100.0	34	4	US-10-632-366-1
4	191	100.0	35	6	US-11-066-697-381
5	191	100.0	156	3	US-09-872-809-7
6	191	100.0	156	5	US-10-872-198-122
7	191	100.0	156	6	US-11-021-951-122
8	191	100.0	176	4	US-10-388-838-112
9	191	100.0	180	4	US-10-081-119-38
10	191	100.0	180	4	US-10-136-841-2
11	191	100.0	180	4	US-10-097-340-145
12	191	100.0	180	4	US-10-295-027-199
13	191	100.0	180	4	US-10-772-531A-2
14	191	100.0	180	4	US-10-173-999-99
15	191	100.0	180	4	US-10-372-483A-2
16	191	100.0	180	4	US-10-443-466A-21
17	191	100.0	180	4	US-10-188-832-84
18	191	100.0	180	4	US-10-100-725-19
19	191	100.0	180	4	US-10-706-791-5
20	191	100.0	180	4	US-10-770-668-46
21	191	100.0	180	5	US-10-741-600-1133
22	191	100.0	180	5	US-10-551-389-38
23	191	100.0	180	5	US-10-951-406-38
24	191	100.0	180	5	US-10-951-477-38
25	191	100.0	180	5	US-10-977-087-38
26	191	100.0	180	5	US-10-981-267-2
27	191	100.0	180	6	US-11-049-518-18

28	191	100.0	180	6	US-11-050-926-145	Sequence 145, App
29	191	100.0	275	5	US-10-821-234-971	Sequence 971, App
30	187	97.9	33	3	US-09-745-078A-5	Sequence 5, App1
31	187	97.9	33	4	US-10-374-624-5	Sequence 41, App1
32	185	96.9	1107	6	US-11-057-058-41	Sequence 6, App1
33	182	95.3	32	3	US-09-745-078A-6	Sequence 6, App1
34	182	95.3	32	4	US-10-374-624-6	Sequence 7, App1
35	177	92.7	31	3	US-09-745-078A-7	Sequence 57, App1
36	177	92.7	31	4	US-10-374-624-7	Sequence 8, App1
37	175	91.6	180	3	US-10-207-655-57	Sequence 9, App1
38	172	90.1	30	3	US-09-745-078A-8	Sequence 10, App1
39	172	90.1	30	4	US-10-374-624-8	Sequence 11, App1
40	168	88.0	29	3	US-09-745-078A-9	Sequence 9, App1
41	168	88.0	29	4	US-10-374-624-9	Sequence 10, App1
42	163	85.3	28	4	US-09-745-078A-10	Sequence 11, App1
43	163	85.3	28	3	US-10-374-624-10	Sequence 11, App1
44	158	82.7	27	3	US-09-745-078A-11	Sequence 11, App1
45	158	82.7	27	4	US-10-374-624-11	Sequence 11, App1

#### ALIGNMENTS

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RESULT 1
US-09-745-078A-2
; Sequence 2, Application US/09745078A
; Publication No. US20030050434A1
; GENERAL INFORMATION:
; APPLICANT: Garth J. S. COOPER
; APPLICANT: Christina M. BUCHANAN
; TITLE OF INVENTION: PEPTIDE
; FILE REFERENCE: 441842000100
; CURRENT APPLICATION NUMBER: US/09/745, 078A
; CURRENT FILING DATE: 2000-12-20
; PRIOR APPLICATION NUMBER: NZ336359
; PRIOR FILING DATE: 1999-06-18
; PRIOR APPLICATION NUMBER: PCT/NZ00/00102
; PRIOR FILING DATE: 2000-06-19
; NUMBER OF SEQ ID NOS: 35
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 2
; LENGTH: 34
; TYPE: PRT
; ORGANISM: Homo Sapien
; FEATURE:
; OTHER INFORMATION: Preplin
US-09-745-078A-2

Query Match      100.0%  Score 191;  DB 3;  Length 34;
Best Local Similarity 100.0%  Pred. No. 4.6e+18;
Matches 34;  Conservative 0;  Mismatch 0;  Indels 0;  Gaps 0;

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Db      1 DVSTPPTVLPDNFPRYPVGKFFQYDTWKSTORL 34

RESULT 2
US-10-374-624-2
; Sequence 2, Application US/10374624
; Publication No. US20030166561A1
; GENERAL INFORMATION:
; APPLICANT: Garth J. S. COOPER
; APPLICANT: Christina M. BUCHANAN
; TITLE OF INVENTION: PEPTIDE
; FILE REFERENCE: 441842000100
; CURRENT APPLICATION NUMBER: US/10/374, 624
; CURRENT FILING DATE: 2003-02-24
; PRIOR APPLICATION NUMBER: US/09/745, 078A
; PRIOR FILING DATE: 2000-12-20
; PRIOR APPLICATION NUMBER: NZ336359
; PRIOR FILING DATE: 1999-06-18
; PRIOR APPLICATION NUMBER: PCT/NZ00/00102
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; PRIOR FILING DATE: 2000-06-19
; NUMBER OF SEQ ID NOS: 35
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 2
; LENGTH: 34
; TYPE: PRT
; ORGANISM: Homo Sapien
; FEATURE:
; OTHER INFORMATION: Preptin
US-10-374-624-2
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Query Match          100.0%; Score 191; DB 4; Length 34;
Best Local Similarity 100.0%; Pred. No. 4,6e-18;
Matches 34; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
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```
Qy      1 DVSTPPTVLPDNFPKRYPVGKFFQYDTWKSTQRL 34
Db      1 DVSTPPTVLPDNFPKRYPVGKFFQYDTWKSTQRL 34
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RESULT 3
US-10-632-366-1
; Sequence 1, Application US/10632366
; Publication No. US20040142393A1
; GENERAL INFORMATION:
; APPLICANT: COOPER, GARTH JAMES SMITH
; APPLICANT: BUCHANAN, CHRISTINE MAREE
; APPLICANT: JAMES, GABRIEL CHRISTOPHER
; TITLE OF INVENTION: METHODS OF USE OF COMPOUNDS WITH PREPTIN FUNCTION
; FILE REFERENCE: 49123.000033.UPL1
; CURRENT APPLICATION NUMBER: US/10/632,366
; PRIOR FILING DATE: 2003-07-31
; PRIOR APPLICATION NUMBER: 60/400,445
; PRIOR FILING DATE: 2002-08-01
; NUMBER OF SEQ ID NOS: 20
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 1
; LENGTH: 34
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-632-366-1
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```

Query Match          100.0%; Score 191; DB 4; Length 34;
Best Local Similarity 100.0%; Pred. No. 4,6e-18;
Matches 34; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
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```
Qy      1 DVSTPPTVLPDNFPKRYPVGKFFQYDTWKSTQRL 34
Db      1 DVSTPPTVLPDNFPKRYPVGKFFQYDTWKSTQRL 34
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RESULT 4
US-11-066-697-381
; Sequence 381, Application US/11066697
; Publication No. US20050187159A1
; GENERAL INFORMATION:
; APPLICANT: Bridon, Dominique P.
; APPLICANT: Ezrin, Alan M.
; APPLICANT: Milner, Peter G.
; APPLICANT: Holmes, Darren L.
; APPLICANT: Thibaudau, Karen
; TITLE OF INVENTION: PROTECTION OF ENDOGENOUS THERAPEUTIC PEPTIDES FROM
; TITLE OF INVENTION: PEPTIDASE ACTIVITY THROUGH CONJUGATION TO BLOOD
; FILE REFERENCE: 500862002301
; CURRENT APPLICATION NUMBER: US/11/066,697
; PRIOR FILING DATE: 2005-02-25
; PRIOR APPLICATION NUMBER: 09/657,276
; PRIOR FILING DATE: 2000-09-07
; PRIOR APPLICATION NUMBER: 60/153,406
; PRIOR FILING DATE: 1999-09-10
; PRIOR APPLICATION NUMBER: 60/159,783
; PRIOR FILING DATE: 1999-10-15
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; NUMBER OF SEQ ID NOS: 1617
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 381
; LENGTH: 35
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
; OTHER INFORMATION: Peptide
US-11-066-697-381
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Query Match          100.0%; Score 191; DB 6; Length 35;
Best Local Similarity 100.0%; Pred. No. 4,7e-18;
Matches 34; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
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```
Qy      1 DVSTPPTVLPDNFPKRYPVGKFFQYDTWKSTQRL 34
Db      2 DVSTPPTVLPDNFPKRYPVGKFFQYDTWKSTQRL 35
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RESULT 5
US-09-972-809-7
; Sequence 7, Application US/09972809
; Patent No. US20020151490A1
; GENERAL INFORMATION:
; APPLICANT: Sundeeep, Khosla
; APPLICANT: Conover, Cheryl A.
; TITLE OF INVENTION: TREATMENT OF OSTEOPOROSIS
; FILE REFERENCE: 07039/183001
; CURRENT APPLICATION NUMBER: US/09/972,809
; PRIOR FILING DATE: 2001-10-05
; PRIOR APPLICATION NUMBER: 09/428,226
; PRIOR FILING DATE: 1999-10-27
; PRIOR APPLICATION NUMBER: 60/045,607
; PRIOR FILING DATE: 1997-05-05
; NUMBER OF SEQ ID NOS: 7
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 7
; LENGTH: 156
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-972-809-7
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```

Query Match          100.0%; Score 191; DB 3; Length 156;
Best Local Similarity 100.0%; Pred. No. 2,3e-17;
Matches 34; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
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Qy      1 DVSTPPTVLPDNFPKRYPVGKFFQYDTWKSTQRL 34
Db      69 DVSTPPTVLPDNFPKRYPVGKFFQYDTWKSTQRL 102
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RESULT 6
US-10-872-198-122
; Sequence 122, Application US/10872198
; Publication No. US20050002897A1
; GENERAL INFORMATION:
; APPLICANT: Ulrich HAUPTS
; APPLICANT: Andre KOLTERMANN
; APPLICANT: Andreas SCHIDIG
; APPLICANT: Christian VOETSMERIER
; APPLICANT: Ulrich Ketting
; TITLE OF INVENTION: NEW BIOLOGICAL ENTITIES AND USE THEREOF
; FILE REFERENCE: 04156.000204
; CURRENT APPLICATION NUMBER: US/10/872,198
; PRIOR FILING DATE: 2004-06-18
; PRIOR APPLICATION NUMBER: 60/543,518
; PRIOR FILING DATE: 2004-02-11
; PRIOR APPLICATION NUMBER: 60/524,960
; PRIOR FILING DATE: 2003-11-25
; PRIOR APPLICATION NUMBER: EP 04003058
; PRIOR FILING DATE: 2004-02-11
; PRIOR APPLICATION NUMBER: EP 03025871
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; PRIOR FILING DATE: 2003-11-11
; PRIOR APPLICATION NUMBER: EP 03025851
; PRIOR FILING DATE: 2003-11-10
; PRIOR APPLICATION NUMBER: EP 03013819
; PRIOR FILING DATE: 2003-06-18
; NUMBER OF SEQ ID NOS: 149
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 122
; LENGTH: 156
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-872-198-122

Query Match          100.0%; Score 191; DB 5; Length 156;
Best Local Similarity 100.0%; Pred. No. 2.3e-17;
Matches 34; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 DVSTPPTVLPDNFPRYPVGKFFQYDTWKSTORL 34
DB 69 DVSTPPTVLPDNFPRYPVGKFFQYDTWKSTORL 102

RESULT 7
US-11-021-951-122
; Sequence 122, Application US/11021951
; Publication No. US20050175581A1
; GENERAL INFORMATION:
; APPLICANT: HAUPTS, Ulrich
; APPLICANT: KOLTERMANN, Andre
; APPLICANT: SCHEIDIG, Andreas
; APPLICANT: VOTSMEIER, Christian
; APPLICANT: Ketsling, Ulrich
; APPLICANT: COCO, Wayne Michael
; TITLE OF INVENTION: New Biological Entities And The Pharmaceutical
; FILE REFERENCE: 04156.0002U5
; CURRENT APPLICATION NUMBER: US/11/021,951
; CURRENT FILING DATE: 2004-12-22
; PRIOR APPLICATION NUMBER: 10/872,198
; PRIOR FILING DATE: 2004-06-18
; PRIOR APPLICATION NUMBER: 60/543,518
; PRIOR FILING DATE: 2004-02-11
; PRIOR APPLICATION NUMBER: 60/524,960
; PRIOR FILING DATE: 2003-11-25
; PRIOR APPLICATION NUMBER: EP 04003058
; PRIOR FILING DATE: 2004-02-11
; PRIOR APPLICATION NUMBER: EP 03025871
; PRIOR FILING DATE: 2003-11-11
; PRIOR APPLICATION NUMBER: EP 03025851
; PRIOR FILING DATE: 2003-11-10
; PRIOR APPLICATION NUMBER: EP 03013819
; PRIOR FILING DATE: 2003-06-18
; NUMBER OF SEQ ID NOS: 191
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 122
; LENGTH: 156
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-021-951-122

Query Match          100.0%; Score 191; DB 6; Length 156;
Best Local Similarity 100.0%; Pred. No. 2.3e-17;
Matches 34; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 DVSTPPTVLPDNFPRYPVGKFFQYDTWKSTORL 34
DB 69 DVSTPPTVLPDNFPRYPVGKFFQYDTWKSTORL 102

RESULT 8
US-10-388-838-112
; Sequence 112, Application US/10388838
; Publication No. US20040180344A1
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; GENERAL INFORMATION:
; APPLICANT: David W. Morris
; APPLICANT: Marc Malandro
; TITLE OF INVENTION: Novel Therapeutic Targets in Cancer
; FILE REFERENCE: 529452001600
; CURRENT APPLICATION NUMBER: US/10/388,838
; CURRENT FILING DATE: 2003-03-14
; NUMBER OF SEQ ID NOS: 114
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 112
; LENGTH: 176
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-388-838-112

Query Match          100.0%; Score 191; DB 4; Length 176;
Best Local Similarity 100.0%; Pred. No. 2.6e-17;
Matches 34; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 DVSTPPTVLPDNFPRYPVGKFFQYDTWKSTORL 34
DB 91 DVSTPPTVLPDNFPRYPVGKFFQYDTWKSTORL 124

RESULT 9
US-10-081-119-38
; Sequence 38, Application US/10081119
; Publication No. US20030045491A1
; GENERAL INFORMATION:
; APPLICANT: Reinhard, Christoph
; APPLICANT: Jefferson, Anne B.
; APPLICANT: Chan, Vivien W.
; TITLE OF INVENTION: TTK in Diagnosis and as a Therapeutic
; FILE REFERENCE: 16932.002
; CURRENT APPLICATION NUMBER: US/10/081,119
; CURRENT FILING DATE: 2002-02-21
; PRIOR APPLICATION NUMBER: 60/289,813
; PRIOR FILING DATE: 2001-02-21
; NUMBER OF SEQ ID NOS: 38
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 38
; LENGTH: 180
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-081-119-38

Query Match          100.0%; Score 191; DB 4; Length 180;
Best Local Similarity 100.0%; Pred. No. 2.7e-17;
Matches 34; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 DVSTPPTVLPDNFPRYPVGKFFQYDTWKSTORL 34
DB 93 DVSTPPTVLPDNFPRYPVGKFFQYDTWKSTORL 126

RESULT 10
US-10-136-841-2
; Sequence 2, Application US/10136841
; Publication No. US20030082176A1
; GENERAL INFORMATION:
; APPLICANT: Lebowitz, Jonathan
; APPLICANT: Beverly, Stephen
; TITLE OF INVENTION: SUBCELLULAR TARGETING OF THERAPEUTIC PROTEINS
; FILE REFERENCE: SYM-007
; CURRENT APPLICATION NUMBER: US/10/136,841
; CURRENT FILING DATE: 2002-08-22
; PRIOR APPLICATION NUMBER: US 60/287,531
; PRIOR FILING DATE: 2001-04-30
; PRIOR APPLICATION NUMBER: US 60/304,609
; PRIOR FILING DATE: 2001-07-10
; PRIOR APPLICATION NUMBER: US 60/329,461
; PRIOR FILING DATE: 2001-10-15
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: PRIOR APPLICATION NUMBER: US 60/351,276
: PRIOR FILING DATE: 2002-01-23
: NUMBER OF SEQ ID NOS: 22
: SOFTWARE: PatentIn version 3.0
: SEQ ID NO 2
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: LENGTH: 180
:
: TYPE: PRT
: ORGANISM: Homo sapiens
: US-10-136-841-2

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Query Match	100.0%;	Score 191;	DB 4;	Length 180;
Best Local Similarity	100.0%;	Pred. No. 2.7e-17;		
Matches 34;	Conservative 0;	Mismatches 0;	Indels 0;	Gaps 0;

Qy 1 DVSTPPTVL PDNPPRY PVGKFFQYTWKQSTQRL 34  
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Db 93 DVSTPPTVL PDNPPRY PVGKFFQYTWKQSTQRL 126

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RESULT 11
US-10-097-340-145
; Sequence 145, Application US/10097340
; Publication No. US20030087250A1
; GENERAL INFORMATION:

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1 APPLICANT: John MONAHAN  
 2 APPLICANT: Manjula GANNAVARAPU  
 3 APPLICANT: Sebastian HOERSCHE  
 4 APPLICANT: Shubhangi KAMATKAR  
 5 APPLICANT: Steve G. KOVATS  
 6 APPLICANT: Rachel E. MEYERS  
 7 APPLICANT: Michael MORRISSEY  
 8 APPLICANT: Peter OLANDT  
 9 APPLICANT: Ami SEN  
 10 APPLICANT: Peter VEIBY  
 11 APPLICANT: Gordon B. MILLS  
 12 APPLICANT: Robert C. BAST, Jr.  
 13 APPLICANT: Karen LU  
 14 APPLICANT: Rosemarie SCHMANT  
 15 APPLICANT: Xumei ZHAO  
 16 APPLICANT: Karen GIATT  
 17 TITLE OF INVENTION: Nucleic Acid Molecules and Proteins For The Identification,  
 18 TITLE OF INVENTION: Assessment, Prevention, and Therapy of Ovarian Cancer  
 19 FILE REFERENCE: MRI-030  
 20 CURRENT APPLICATION NUMBER: US/10/097,340

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1 // CURRENT FILING DATE: 2002-03-14
2 // PRIOR APPLICATION NUMBER: 60/276,025
3 // PRIOR FILING DATE: 2001-03-14
4 // PRIOR APPLICATION NUMBER: 60/325,149
5 // PRIOR FILING DATE: 2001-09-26
6 // PRIOR APPLICATION NUMBER: 60/276,026
7 // PRIOR FILING DATE: 2001-03-14
8 // PRIOR APPLICATION NUMBER: 60/324,967
9 // PRIOR FILING DATE: 2001/09/26
10 // PRIOR APPLICATION NUMBER: 60/311,732
11 // PRIOR FILING DATE: 2001-08-10
12 // PRIOR APPLICATION NUMBER: 60/325,102
13 // PRIOR FILING DATE: 2001-09-26
14 // PRIOR APPLICATION NUMBER: 60/323,580
15 // PRIOR FILING DATE: 2001-09-19
16 // NUMBER OF SEQ ID NOS: 363
17 // SOFTWARE: FastSeq for Windows Version 4.0
18 // SEQ ID NO: 145
19 // LENGTH: 180
20 // TYPE: PRT
21 // ORGANISM: Homo sapiens
22 // US-10-097-340-145

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Db 93 DVSTPPTVLDPDNFPRYPVGKFFQYDTWKQSTÖRL 126

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RESULT 12
US-10-295-027-199
; Sequence 199, Application US/10295027
; Publication No. US20030232350A1
; GENERAL INFORMATION:

```

1 Applicant: Azzi, Daniel  
 2 Applicant: Azzi, Natasha  
 3 Applicant: Ginsberg, Wendy M  
 4 Applicant: Glyn, Kurt C.  
 5 Applicant: Glyn, Richard  
 6 Applicant: Hevezzi, Peter A.  
 7 Applicant: Mack, David H.  
 8 Applicant: Murray, Richard  
 9 Applicant: Watson, Susan R.  
 10 Applicant: Eos Biotechnology

TITLE OF INVENTION: Methods of Diagnosis of Cancer, Compositions and Methods of Screening for Modulators of Cancer

FILE REFERENCE: 018501-012500US  
CURRENT APPLICATION NUMBER: US/10/295,027

;  
CURRENT FILING DATE: 2002-11-13  
;  
PRIOR APPLICATION NUMBER: US 09/663,733  
;

; PRIOR FILING DATE: 2000-09-15  
 ; PRIOR APPLICATION NUMBER: US 60/350,666  
 ;

; PRIOR FILING DATE: 2001-11-13  
 ; PRIOR APPLICATION NUMBER: US 60/335,394  
 ; PRIOR FILING DATE: 2001-11-13

; PRIORITY DATE: 2001-11-15  
; PRIOR APPLICATION NUMBER: US 60/332,464

; PRIOR FILING DATE: 2001-11-21  
 ; PRIOR APPLICATION NUMBER: US 60/334,393  
 ; PRIOR FILING DATE: 2001-11-20

; PRIORITY DATE: 2001-11-29  
 ; PRIORITY NUMBER: US 60/340,376  
 ; PRIORITY DATE: 2001-11-14

; PRIOR FILING DATE: 2001-12-14  
 ; PRIOR APPLICATION NUMBER: US 60/347,211  
 ; PRIOR FILING DATE: 2003-01-08

; PRIOR FILING DATE: 2002-01-08  
 ; PRIOR APPLICATION NUMBER: US 60/347,349  
 ; PRIOR FILING DATE: 2003-01-10

; PRIOR FILING DATE: 2002-01-10  
 ; PRIOR APPLICATION NUMBER: US 60/355,250  
 ; PRIOR FILING DATE: 2002-03-08

PRIOR FILING DATE: 2002-02-08  
PRIOR APPLICATION NUMBER: US 60/356,714  
PRIOR FILING DATE: 2003-03-12

PRIOR FILING DATE: 2002-02-15  
Remaining Prior Application data removed - See File Wrapper or PALM.  
REMARKS ON CNO IN VOC: 1386

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; NUMBER OF SEQ ID NOS: 1386  
; SOFTWARE: PatentIn Ver. 2.1  
CDOTD NO. 100
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; SEQ ID NO 199  
; LENGTH: 180  
; TYPE: DDT

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; TYPE: PRI
; ORGANISM: Homo sapiens
; 10 205 037 100

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US-10-293-027-193  
66T-120-562-0193  
Quinn: Watch

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Best Local Similarity	100.0%	Pred. NO.	2.7e-17	
Matches	34	Consecutive	0	Mismatches
			Indels	0
			Gaps	0

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RESULT 13  
US-10-272

; Sequence 2, Application US/10272531A  
; Publication No. US20040005309A1

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; GENERAL INFORMATION:
; APPLICANT: Lebowitz, Jonathan H

```

APPLICANT: Beverly, Stephen  
; APPLICANT: Sly, William S.  
;

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; TITLE OF INVENTION: TARGETED THERAPEUTIC PROTEINS
; FILE REFERENCE: SYM-009
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; CURRENT APPLICATION NUMBER: US/10/272,531A
; CURRENT FILING DATE: 2002-10-16

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; PRIOR APPLICATION NUMBER: US 60/384,452
; PRIOR FILING DATE: 2002-05-29
; PRIOR APPLICATION NUMBER: US 60/386,019
; PRIOR FILING DATE: 2002-06-05
; PRIOR APPLICATION NUMBER: US 60/408,816
; PRIOR FILING DATE: 2002-09-06
; NUMBER OF SEQ ID NOS: 22
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 2
; LENGTH: 180
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-272-531A-2

Query Match      100.0%; Score 191; DB 4; Length 180;
Best Local Similarity 100.0%; Pred. No. 2.7e-17;
Matches 34; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Db 93 DVSTPPTVLPDNFRPYVGKFFQYDTWKOSTORL 126

RESULT 14
US-10-173-999-99
; Sequence 99, Application US/10173999
; Publication No. US20040005563A1
; GENERAL INFORMATION:
; APPLICANT: Mack, David H.
; APPLICANT: Gish, Kurt C.
; APPLICANT: Eos Biotechnology, Inc.
; TITLE OF INVENTION: Methods of Diagnosis of Ovarian Cancer, Compositions
; TITLE OF INVENTION: and Methods of Screening for Modulators of Ovarian
; FILE REFERENCE: 018501-002420US
; CURRENT APPLICATION NUMBER: US/10/173,999
; CURRENT FILING DATE: 2002-06-17
; PRIOR APPLICATION NUMBER: US 60/299,234
; PRIOR FILING DATE: 2001-06-18
; PRIOR APPLICATION NUMBER: US 60/315,287
; PRIOR FILING DATE: 2001-08-27
; PRIOR APPLICATION NUMBER: US 60/350,666
; PRIOR FILING DATE: 2001-11-13
; PRIOR APPLICATION NUMBER: US 60/372,246
; PRIOR FILING DATE: 2001-04-12
; NUMBER OF SEQ ID NOS: 163
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 99
; LENGTH: 180
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-173-999-99

Query Match      100.0%; Score 191; DB 4; Length 180;
Best Local Similarity 100.0%; Pred. No. 2.7e-17;
Matches 34; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 DVSTPPTVLPDNFRPYVGKFFQYDTWKOSTORL 34
Db 93 DVSTPPTVLPDNFRPYVGKFFQYDTWKOSTORL 126

RESULT 15
US-10-272-483A-2
; Sequence 2, Application US/10272483A
; Publication No. US20040006008A1
; GENERAL INFORMATION:
; APPLICANT: Lebowitz, Jonathan H
; APPLICANT: Beverly, Stephen
; TITLE OF INVENTION: TARGETED THERAPEUTIC PROTEINS
; FILE REFERENCE: SYM-007CP
; CURRENT APPLICATION NUMBER: US/10/272,483A
; CURRENT FILING DATE: 2002-10-16
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; PRIOR APPLICATION NUMBER: US 60/287,531
; PRIOR FILING DATE: 2001-04-30
; PRIOR APPLICATION NUMBER: US 10/136,841
; PRIOR FILING DATE: 2002-04-30
; PRIOR APPLICATION NUMBER: US 60/384,452
; PRIOR FILING DATE: 2002-05-29
; PRIOR APPLICATION NUMBER: US 60/386,019
; PRIOR FILING DATE: 2002-06-05
; PRIOR APPLICATION NUMBER: US 60/408,816
; PRIOR FILING DATE: 2002-09-06
; PRIOR APPLICATION NUMBER: US 60/304,609
; PRIOR FILING DATE: 2001-07-10
; PRIOR APPLICATION NUMBER: US 60/329,461
; PRIOR FILING DATE: 2001-10-15
; PRIOR APPLICATION NUMBER: US 60/351,276
; PRIOR FILING DATE: 2002-01-23
; NUMBER OF SEQ ID NOS: 22
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 2
; LENGTH: 180
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-272-483A-2

Query Match      100.0%; Score 191; DB 4; Length 180;
Best Local Similarity 100.0%; Pred. No. 2.7e-17;
Matches 34; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 DVSTPPTVLPDNFRPYVGKFFQYDTWKOSTORL 34
Db 93 DVSTPPTVLPDNFRPYVGKFFQYDTWKOSTORL 126
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Job time : 104.333 secs

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November 2005

Published\_Applications\_Nucleic Acid and Published\_Applications\_Amino Acid database searches now generate two sets of results each. The Published\_Applications\_databases have been split into two parts to reduce the amount of time required for their daily updates. This results in more machine time being available for processing searches.

Newly published applications will appear in the Published\_Applications\_New databases; older published applications make up the Published\_Applications\_Main databases.

Searches run against Nucleic Acid Published\_Applications produce two sets of results, with the extensions **.rnpbm** (Published\_Applications\_NA\_Main) and **.rnpbn** (Published\_Applications\_NA\_New).  
Searches run against Amino Acid Published\_Applications produce two sets of results, with the extensions **.rapbm** (Published\_Applications\_AA\_Main) and **.rapbn** (Published\_Applications\_AA\_New).

3. 11. 2005 2005

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GenCore version 5.1.8  
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OM protein - protein search, using sw model

Run on: May 21, 2006, 12:48:45 ; Search time 4 Seconds  
(without alignments)  
18.157 Million cell updates/sec

Title: US-10-632-366-1

Perfect score: 191

Sequence: 1 DVSTPPTVLPDNFPRYPVGKFPQYDWTWKSTQRL 34

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 21570 seqs, 2136119 residues

Total number of hits satisfying chosen parameters: 21570

Minimum DB seq length: 0  
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : Published Applications AA New:\*

- 1: /EMC\_Celerra\_SIDS3/ptodata/2/pubpaa/US09\_NEW\_PUB\_rep.\*
- 2: /EMC\_Celerra\_SIDS3/ptodata/2/pubpaa/US06\_NEW\_PUB\_rep.\*
- 3: /EMC\_Celerra\_SIDS3/ptodata/2/pubpaa/US07\_NEW\_PUB\_rep.\*
- 4: /EMC\_Celerra\_SIDS3/ptodata/2/pubpaa/US08\_NEW\_PUB\_rep.\*
- 5: /EMC\_Celerra\_SIDS3/ptodata/2/pubpaa/PCT\_NEW\_PUB\_rep.\*
- 6: /EMC\_Celerra\_SIDS3/ptodata/2/pubpaa/US10\_NEW\_PUB\_rep.\*
- 7: /EMC\_Celerra\_SIDS3/ptodata/2/pubpaa/US11\_NEW\_PUB\_rep.\*
- 8: /EMC\_Celerra\_SIDS3/ptodata/2/pubpaa/US66\_NEW\_PUB\_rep.\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	47	24.6	269	7	US-11-246-999-127
2	46	24.1	438	6	US-10-196-749-110
3	45	23.6	228	1	US-09-949-925-110
4	43	22.5	309	7	US-11-249-111-72
5	41.5	21.7	477	7	US-11-264-784-112
6	40	20.9	108	7	US-11-091-234A-6
7	40	20.9	109	7	US-11-254-679-13
8	39.5	20.7	356	6	US-10-505-928-357
9	39	20.4	811	6	US-10-505-928-32
10	39	20.4	811	6	US-10-505-928-32
11	39	20.4	811	6	US-10-505-928-32
12	39	20.4	811	6	US-10-505-928-32
13	38	19.9	123	7	US-11-254-182-34
14	38	19.9	365	7	US-11-251-465-25
15	38	19.9	847	6	US-10-505-928-300
16	38	19.9	3396	6	US-10-505-928-449
17	37.5	19.6	153	7	US-11-314-018-10
18	37.5	19.6	337	6	US-10-196-749-268
19	37.5	19.6	337	7	US-11-101-316-74
20	37.5	19.6	384	6	US-10-505-928-395
21	37.5	19.6	819	6	US-10-551-465-31
22	37.5	19.6	989	7	US-11-312-958-30
23	37.5	19.6	1332	7	US-11-314-018-18
24	37	19.4	100	6	US-10-489-730-12
25	37	19.4	100	6	US-10-489-730-13

26	37	19.4	100	6	US-10-489-730-14	Sequence 14, App1
27	37	19.4	107	7	US-11-271-008-7	Sequence 7, App1
28	37	19.4	118	7	US-11-297-317-2	Sequence 2, App1
29	37	19.4	118	7	US-11-297-317-9	Sequence 9, App1
30	37	19.4	118	7	US-11-297-317-10	Sequence 10, App1
31	37	19.4	121	6	US-10-196-749-368	Sequence 368, App
32	37	19.4	241	7	US-11-254-185-3	Sequence 3, App1
33	37	19.4	241	7	US-11-254-185-35	Sequence 35, App1
34	37	19.4	426	6	US-10-489-730-6	Sequence 6, App1
35	37	19.4	448	7	US-11-297-317-4	Sequence 4, App1
36	37	19.4	450	6	US-10-489-730-4	Sequence 4, App1
37	37	19.4	553	6	US-10-511-937-2563	Sequence 2563, Ap
38	37	19.4	587	6	US-10-489-730-2	Sequence 2, App1
39	37	19.4	661	6	US-10-489-730-11	Sequence 11, App1
40	37	19.4	855	7	US-11-254-185-2	Sequence 2, App1
41	36.5	19.1	252	7	US-11-260-844-12	Sequence 12, App1
42	36	18.8	190	7	US-11-268-890-4	Sequence 4, App1
43	36	18.8	217	7	US-11-249-111-112	Sequence 112, App
44	36	18.8	415	6	US-10-511-937-2993	Sequence 2993, Ap
45	36	18.8	416	6	US-10-502-993-2	Sequence 2, App1

## ALIGNMENTS

RESULT 1  
US-11-246-999-127  
; Sequence 127, Application US/11246999  
; Publication No. US20060099622A1  
; GENERAL INFORMATION:  
; APPLICANT: Ni et al.  
; TITLE OF INVENTION: 12 Human Secreted Proteins  
; FILE REFERENCE: PF489P2  
; CURRENT APPLICATION NUMBER: US/11/246, 999  
; PRIOR FILING DATE: 2005-10-11  
; PRIOR APPLICATION NUMBER: US/09/984, 130  
; PRIOR FILING DATE: 2001-10-29  
; PRIOR APPLICATION NUMBER: 60/243, 792  
; PRIOR FILING DATE: 2000-10-30  
; PRIOR APPLICATION NUMBER: 09/836, 353  
; PRIOR FILING DATE: 2001-04-18  
; PRIOR APPLICATION NUMBER: 60/198, 407  
; PRIOR FILING DATE: 2000-04-19  
; PRIOR APPLICATION NUMBER: PCT/US99/25031  
; PRIOR FILING DATE: 1999-10-27  
; PRIOR APPLICATION NUMBER: 60/105, 971  
; PRIOR FILING DATE: 1998-10-28  
; NUMBER OF SEQ ID NOS: 149  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 127  
; LENGTH: 269  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-11-246-999-127

Query Match 24.6%; Score 47; DB 7; Length 269;  
Best Local Similarity 52.9%; Pred. No. 6.1;  
Matches 9; Conservative 3; Mismatches 3; Indels 2; Gaps 1;

QY 5 PP--TVLPDNFPRYPVG 19  
Db 143 PPAGTILPNNYPCYVTG 159

RESULT 2  
US-10-196-749-110  
; Sequence 110, Application US/10196749  
; Publication No. US20060094864A1  
; GENERAL INFORMATION:  
; APPLICANT: Baker, Kevin P.  
; APPLICANT: Chen, Jian  
; APPLICANT: Desnoyers, Luc  
; APPLICANT: Goddard, Audrey

```

; APPLICANT: Godowski, Paul J.
; APPLICANT: Guiney, Austin L.
; APPLICANT: Pan, James
; APPLICANT: Smith, Victoria
; APPLICANT: Watanabe, Colin K.
; APPLICANT: Wood, William I.
; APPLICANT: Zhang, Zemin
; TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC
; FILE REFERENCE: P3430R1C340
; CURRENT FILING DATE: 2002-07-16
; PRIOR APPLICATION NUMBER: US/10/196,749
; PRIOR FILING DATE: 2002-01-15
; PRIOR APPLICATION NUMBER: 60/052586
; PRIOR FILING DATE: 1997-10-17
; PRIOR APPLICATION NUMBER: 60/059263
; PRIOR FILING DATE: 1997-09-18
; PRIOR APPLICATION NUMBER: 60/059266
; PRIOR FILING DATE: 1997-09-18
; PRIOR APPLICATION NUMBER: 60/062250
; PRIOR FILING DATE: 1997-10-17
; PRIOR APPLICATION NUMBER: 60/063120
; PRIOR FILING DATE: 1997-10-24
; PRIOR APPLICATION NUMBER: 60/063121
; PRIOR FILING DATE: 1997-10-24
; PRIOR APPLICATION NUMBER: 60/063486
; PRIOR FILING DATE: 1997-10-21
; PRIOR APPLICATION NUMBER: 60/063540
; PRIOR FILING DATE: 1997-10-28
; PRIOR APPLICATION NUMBER: 60/063541
; PRIOR FILING DATE: 1997-10-28
; PRIOR APPLICATION NUMBER: 60/063544
; PRIOR FILING DATE: 1997-10-28
; PRIOR APPLICATION NUMBER: 60/063544
; PRIOR FILING DATE: 1997-10-28
; PRIOR APPLICATION data removed - See File Wrapper or PALM.
; NUMBER OF SEQ ID NOS: 612
; SEQ ID NO 110
; LENGTH: 438
; TYPE: PRT
; ORGANISM: Homo Sapien
; US-10-196-749-110

Query Match      24.1% Score 46; DB 6; Length 438;
Best Local Similarity 38.2%; Pred. No. 16;
Matches 13; Conservative 5; Mismatches 10; Indels 6; Gaps 2;

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Db      93 DASTPELAHPPELMPFEGSRHP-STFWQSATWKE 125

RESULT 3
; US-09-949-925-110
; Sequence 110, Application US/09949925
; Publication No. US2006009575A9
; GENERAL INFORMATION:
; APPLICANT: Rosen et al.
; TITLE OF INVENTION: 67 Human secreted proteins
; FILE REFERENCE: P2023P2
; CURRENT APPLICATION NUMBER: US/09/949,925
; CURRENT FILING DATE: 2001-09-12
; PRIOR APPLICATION NUMBER: US 60/232,150
; PRIOR FILING DATE: 2000-12-09
; PRIOR APPLICATION NUMBER: PCT/US99/01621
; PRIOR FILING DATE: 1999-01-27
; PRIOR APPLICATION NUMBER: US 60/073,160
; PRIOR FILING DATE: 1998-01-30
; PRIOR APPLICATION NUMBER: US 60/073,159
; PRIOR FILING DATE: 1998-01-30
; PRIOR APPLICATION NUMBER: US 60/073,165
; PRIOR FILING DATE: 1998-01-30
; PRIOR APPLICATION NUMBER: US 60/073,164
; PRIOR FILING DATE: 1998-01-30
; PRIOR APPLICATION NUMBER: US 60/073,167
; PRIOR FILING DATE: 1998-01-30
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; PRIOR APPLICATION NUMBER: US 60/073,162
; PRIOR FILING DATE: 1998-01-30
; PRIOR APPLICATION NUMBER: US 60/073,161
; PRIOR FILING DATE: 1998-01-30
; PRIOR APPLICATION NUMBER: US 60/073,170
; PRIOR FILING DATE: 1998-01-30
; NUMBER OF SEQ ID NOS: 298
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 110
; LENGTH: 228
; TYPE: PRT
; ORGANISM: Homo sapiens
; FEATURE:
; NAME/KEY: SITE
; LOCATION: (228)
; OTHER INFORMATION: Xaa equals stop translation
; US-09-949-925-110

Query Match      23.6% Score 45; DB 1; Length 228;
Best Local Similarity 45.0%; Pred. No. 9;
Matches 9; Conservative 2; Mismatches 9; Indels 0; Gaps 0;

Qy      2 VSTPPTVLPDNFPRYPVGK 21
Db      152 VALPPDLKSRFQTAPPGKY 171

RESULT 4
; US-11-249-111-72
; Sequence 72, Application US/11249111
; Publication No. US20060099623A1
; GENERAL INFORMATION:
; APPLICANT: Glenn, Matthew
; APPLICANT: Lubbers, Mark W
; APPLICANT: Dekker, James
; TITLE OF INVENTION: Polynucleotides and polypeptides isolated from Lactobacillus
; FILE REFERENCE: 13353.10481C2
; CURRENT APPLICATION NUMBER: US/11/249,111
; CURRENT FILING DATE: 2005-10-11
; PRIOR APPLICATION NUMBER: 10/288,930
; PRIOR FILING DATE: 2002-11-05
; PRIOR APPLICATION NUMBER: 09/724,623
; PRIOR FILING DATE: 2000-11-28
; PRIOR APPLICATION NUMBER: 60/148,801
; PRIOR FILING DATE: 1999-12-02
; NUMBER OF SEQ ID NOS: 124
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 72
; LENGTH: 309
; TYPE: PRT
; ORGANISM: Lactobacillus rhamnosus
; US-11-249-111-72

Query Match      22.5% Score 43; DB 7; Length 309;
Best Local Similarity 47.4%; Pred. No. 26;
Matches 9; Conservative 2; Mismatches 8; Indels 0; Gaps 0;

Qy      7 TVLPDNFPRYPVGKFPQYD 25
Db      290 TVAPDNGERYLSTDLFKFD 308

RESULT 5
; US-11-264-784-112
; Sequence 112, Application US/11264784
; Publication No. US20060094092A1
; GENERAL INFORMATION:
; APPLICANT: E.I. duPont de Nemours & Co., Inc.
; APPLICANT: Damude, Howard Glenn
; APPLICANT: Gillies, Peter John
; APPLICANT: Macool, Daniel Joseph
; APPLICANT: Picataggio, Stephen K.
```



```
; APPLICANT: Pollak, Dana M. Walters
; APPLICANT: Ragghianti, James John
; APPLICANT: Xue, Zhixiong
; APPLICANT: Yadav, Narendra S.
; APPLICANT: Zhang, Hongxiang
; APPLICANT: Zhu, Quim
; TITLE OF INVENTION: HIGH ARACHIDONIC ACID PRODUCING STRAINS OF YARROWIA LIPOLYTICA
; FILE REFERENCE: CL3136 USA
; CURRENT APPLICATION NUMBER: US/11/264,784
; CURRENT FILING DATE: 2005-11-01
; NUMBER OF SEQ ID NOS: 375
; SOFTWARE: PatentIn version 3.3
; SEQ ID NO 112
; LENGTH: 477
; TYPE: PRT
; ORGANISM: Saccharomyces cerevisiae (GenBank Accession No. NP_010935)
; US-11-264-784-112

Query Match      21.7%; Score 41.5; DB 7; Length 477;
Best Local Similarity 30.3%; Pred. No. 74;
Matches 10; Conservative 6; Mismatches 10; Indels 7; Gaps 2;

QY      8 VLPDNPFRYPVKGKFPQYDTW-----KQSTQRL 34
Db      29 IMSDNGKAYSI-KFLTFNTWGLKYVSGHRRERL 60

RESULT 6
US-11-091-234A-6
; Sequence 6, Application US/11091234A
; Publication No. US2006008845A1
; GENERAL INFORMATION:
; APPLICANT: Lu, Jin
; TITLE OF INVENTION: METHOD AND APPARATUS FOR ANALYZING AND GENERATING
; FILE REFERENCE: CENS052NP
; CURRENT APPLICATION NUMBER: US/11/091,234A
; CURRENT FILING DATE: 2005-03-28
; PRIOR APPLICATION NUMBER: 60/558,090
; PRIOR FILING DATE: 2004-03-31
; NUMBER OF SEQ ID NOS: 41
; SOFTWARE: PatentIn version 3.3
; SEQ ID NO 6
; LENGTH: 108
; TYPE: PRT
; ORGANISM: Homo sapiens
; FEATURE:
; NAME/KEY: MISC FEATURE
; LOCATION: (1)..(108)
; OTHER INFORMATION: Vh4 heavy chain variable region
; FEATURE:
; NAME/KEY: MISC FEATURE
; LOCATION: (1)..(33)
; OTHER INFORMATION: framework 1
; FEATURE:
; NAME/KEY: MISC FEATURE
; LOCATION: (34)..(34)
; OTHER INFORMATION: complementarity determining region 1 (CDR1), X is any amino acid.
; FEATURE:
; NAME/KEY: MISC FEATURE
; LOCATION: (35)..(48)
; OTHER INFORMATION: framework 2
; FEATURE:
; NAME/KEY: MISC FEATURE
; LOCATION: (49)..(49)
; OTHER INFORMATION: complementarity determining region 2 (CDR2), X is any amino acid.
; FEATURE:
; NAME/KEY: MISC FEATURE
; LOCATION: (50)..(81)
; OTHER INFORMATION: framework 3
; FEATURE:
; NAME/KEY: MISC FEATURE
; LOCATION: (82)..(82)
```

```
; OTHER INFORMATION: complementarity determining region 3 (CDR3), X is any amino acid.
; FEATURE:
; NAME/KEY: MISC FEATURE
; LOCATION: (83)..(108)
; OTHER INFORMATION: framework 4
; US-11-091-234A-6

Query Match      20.9%; Score 40; DB 7; Length 108;
Best Local Similarity 61.5%; Pred. No. 18;
Matches 8; Conservative 1; Mismatches 4; Indels 0; Gaps 0;

QY      2 VSTRPTVLPDNPFP 14
Db      91 VSSAPTKAPDVFP 103

RESULT 7
US-11-254-679-13
; Sequence 13, Application US/11254679
; Publication No. US20060099207A1
; GENERAL INFORMATION:
; APPLICANT: Wu, Heiren
; APPLICANT: Allan, Christian
; APPLICANT: Gao, Changshou
; APPLICANT: An, Ling-Ling
; APPLICANT: Kiener, Peter
; APPLICANT: Mao, Su-Yau
; TITLE OF INVENTION: High Affinity Antibodies Against HMGB1 and Method of Use Thereof
; FILE REFERENCE: HB601US
; CURRENT APPLICATION NUMBER: US/11/254,679
; CURRENT FILING DATE: 2005-10-21
; PRIOR APPLICATION NUMBER: 60/620,726
; PRIOR FILING DATE: 2004-10-22
; PRIOR APPLICATION NUMBER: 60/651,512
; PRIOR FILING DATE: 2005-02-10
; PRIOR APPLICATION NUMBER: 60/658,572
; PRIOR FILING DATE: 2005-03-07
; PRIOR APPLICATION NUMBER: 60/662,944
; PRIOR FILING DATE: 2005-03-18
; PRIOR APPLICATION NUMBER: 60/713,712
; PRIOR FILING DATE: 2005-09-09
; NUMBER OF SEQ ID NOS: 103
; SOFTWARE: PatentIn version 3.3
; SEQ ID NO 13
; LENGTH: 109
; TYPE: PRT
; ORGANISM: Homo sapiens
; US-11-254-679-13

Query Match      20.9%; Score 40; DB 7; Length 109;
Best Local Similarity 31.0%; Pred. No. 18;
Matches 9; Conservative 7; Mismatches 13; Indels 0; Gaps 0;

QY      4 TTPPTVLPDNPFRYPVKGKFPQYDTWKSTQ 32
Db      77 TISSLPDDFAITYCCQYNSYTFPGGTRK 105

RESULT 8
US-10-505-928-357
; Sequence 357, Application US/10505928
; Publication No. US20060088532A1
; GENERAL INFORMATION:
; APPLICANT: Ludwig Institute for Cancer Research et al.
; TITLE OF INVENTION: LYMPHATIC ENDOTHELIAL GENES
; FILE REFERENCE: 28967/39178
; CURRENT APPLICATION NUMBER: US/10/505,928
; CURRENT FILING DATE: 2004-08-27
; PRIOR APPLICATION NUMBER: US 60/363,019
; PRIOR FILING DATE: 2002-03-07
; NUMBER OF SEQ ID NOS: 866
; SOFTWARE: PatentIn 3.2
```

```
; SEQ ID NO 357
; LENGTH: 3256
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-505-928-357
```

```
Query Match          20.7%; Score 39.5; DB 6; Length 3256;
Best Local Similarity 31.4%; Pred. No. 1.6e+03;
Matches 11; Conservative 4; Mismatches 17; Indels 3; Gaps 1;
```

```
QY      2 VSTPTVLDPDNFPRYPVGKFE---FOYDTWKQSTQRL 33
      |||  :  |||  :  |||  :  |||  :  |||  :
Db      326 VQTPSKAVGASFPVLYEPARKTKTPVQISQQQNSRQK 360
```

```
RESULT 9
US-10-505-928-32
; Sequence 32, Application US/10505928
; Publication No. US20060088532A1
```

```
; GENERAL INFORMATION:
; APPLICANT: Ludwig Institute for Cancer Research et al.
```

```
; TITLE OF INVENTION: LYMPHATIC ENDOTHELIAL GENES
```

```
; FILE REFERENCE: 28967/39178
```

```
; CURRENT APPLICATION NUMBER: US/10/505,928
```

```
; PRIOR FILING DATE: 2004-08-27
```

```
; PRIOR APPLICATION NUMBER: US 60/363,019
```

```
; NUMBER OF SEQ ID NOS: 866
```

```
; SOFTWARE: Patentin 3.2
```

```
; SEQ ID NO 32
```

```
; LENGTH: 811
```

```
; TYPE: PRT
```

```
; ORGANISM: Homo sapiens
```

```
US-10-505-928-32
```

```
Query Match          20.4%; Score 39; DB 6; Length 811;
Best Local Similarity 28.6%; Pred. No. 3.2e+02;
Matches 10; Conservative 4; Mismatches 17; Indels 4; Gaps 1;
```

```
QY      4 TPTPTVLDPDNFPRYP---VGKFPQYDTWKQSTQRL 34
      |||  :  |||  :  |||  :  |||  :  |||  :
Db      441 TTPAGLAHELPPQPOLQQQGRFLAGVAMGAAAREL 475
```

```
RESULT 10
US-10-505-928-87
```

```
; Sequence 87, Application US/10505928
```

```
; Publication No. US20060088532A1
```

```
; GENERAL INFORMATION:
; APPLICANT: Ludwig Institute for Cancer Research et al.
```

```
; TITLE OF INVENTION: LYMPHATIC ENDOTHELIAL GENES
```

```
; FILE REFERENCE: 28967/39178
```

```
; CURRENT APPLICATION NUMBER: US/10/505,928
```

```
; PRIOR FILING DATE: 2004-08-27
```

```
; PRIOR APPLICATION NUMBER: US 60/363,019
```

```
; NUMBER OF SEQ ID NOS: 866
```

```
; SOFTWARE: Patentin 3.2
```

```
; SEQ ID NO 87
```

```
; LENGTH: 811
```

```
; TYPE: PRT
```

```
; ORGANISM: Homo sapiens
```

```
US-10-505-928-87
```

```
Query Match          20.4%; Score 39; DB 6; Length 811;
Best Local Similarity 28.6%; Pred. No. 3.2e+02;
Matches 10; Conservative 4; Mismatches 17; Indels 4; Gaps 1;
```

```
QY      4 TPTPTVLDPDNFPRYP---VGKFPQYDTWKQSTQRL 34
      |||  :  |||  :  |||  :  |||  :  |||  :
Db      441 TTPAGLAHELPPQPOLQQQGRFLAGVAMGAAAREL 475
```

```
RESULT 11
US-11-314-018-6
```

```
; Sequence 6, Application US/11314018
```

```
; Publication No. US20060090220A1
```

```
; GENERAL INFORMATION:
```

```
; APPLICANT: TANAKA, Masao
```

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; APPLICANT: YOKOYAMA, Tomoko
```

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; APPLICANT: AOYAGI, Moriochi
```

```
; APPLICANT: HASEGAWA, Makoto
```

```
; APPLICANT: EHARA, Gaku
```

```
; APPLICANT: KIMURA, Masaharu
```

```
; APPLICANT: NISHIHASHI, Hideji
```

```
; TITLE OF INVENTION: Polypeptide having larvae growth inhibiting or insecticidal effect on scarabaeidae insects and
```

```
; TITLE OF INVENTION: polynucleotide encoding the same
```

```
; FILE REFERENCE: OP135
```

```
; CURRENT APPLICATION NUMBER: US/11/314,018
```

```
; PRIOR FILING DATE: 2005-12-22
```

```
; PRIOR APPLICATION NUMBER: JP 2001-115754
```

```
; PRIOR FILING DATE: 2001-04-13
```

```
; PRIOR APPLICATION NUMBER: JP 2001-203463
```

```
; NUMBER OF SEQ ID NOS: 22
```

```
; SOFTWARE: Patentin Ver. 2.0
```

```
; SEQ ID NO 6
```

```
; LENGTH: 1386
```

```
; TYPE: PRT
```

```
; ORGANISM: Bacillus popilliae
```

```
US-11-314-018-6
```

```
Query Match          20.4%; Score 39; DB 7; Length 1386;
Best Local Similarity 35.0%; Pred. No. 6.3e+02;
Matches 7; Conservative 4; Mismatches 9; Indels 0; Gaps 0;
```

```
QY      9 LPDNFPRYPVGKFPQYDTWK 28
      :|||  :  |||  :  |||  :  |||  :
Db      855 VPDNIPHADIPVCGEFDRCX 874
```

```
RESULT 12
US-10-505-928-104
```

```
; Sequence 104, Application US/10505928
```

```
; Publication No. US20060088532A1
```

```
; GENERAL INFORMATION:
; APPLICANT: Ludwig Institute for Cancer Research et al.
```

```
; TITLE OF INVENTION: LYMPHATIC ENDOTHELIAL GENES
```

```
; FILE REFERENCE: 28967/39178
```

```
; CURRENT APPLICATION NUMBER: US/10/505,928
```

```
; PRIOR FILING DATE: 2004-08-27
```

```
; PRIOR APPLICATION NUMBER: US 60/363,019
```

```
; NUMBER OF SEQ ID NOS: 866
```

```
; SOFTWARE: Patentin 3.2
```

```
; SEQ ID NO 104
```

```
; LENGTH: 3460
```

```
; TYPE: PRT
```

```
; ORGANISM: Homo sapiens
```

```
US-10-505-928-104
```

```
Query Match          20.4%; Score 39; DB 6; Length 3460;
Best Local Similarity 66.7%; Pred. No. 1.9e+03;
Matches 8; Conservative 0; Mismatches 4; Indels 0; Gaps 0;
```

```
QY      6 PTVLPDNFPRYP 17
      |||  |||  |||  |||  |||  |||
Db      2515 PTVLQDNFMRAP 2526
```

```
RESULT 13
US-11-254-182-34
```

```
; Sequence 34, Application US/11254182
```

```
; Publication No. US20060088532A1
```

```
; GENERAL INFORMATION:
```

```

1  APPLICANT: ANDY, JAMES
2  APPLICANT: GWEE, SHIANG C.
3  APPLICANT: LIU, JUN
4  APPLICANT: SHEN YE
5  TITLE OF INVENTION: ANTIBODY FORMULATIONS
6  FILE REFERENCE: P2104R1
7  CURRENT APPLICATION NUMBER: US/11/254,182
8  CURRENT FILING DATE: 2005-10-19
9  PRIOR APPLICATION NUMBER: US 60/620,413
10 PRIOR FILING DATE: 2004-10-20
11 NUMBER OF SEQ ID NOS: 74
12 SEQ ID NO 34
13 LENGTH: 123
14 TYPE: prt
15 ORGANISM: Artificial sequence
16 FEATURE:
17 OTHER INFORMATION: Sequence is synthesized
18 US-11-254-182-34

```

Query Match	19.9%	Score 38;	DB 7;	Length 123;
Best Local Similarity	31.6%	Pred. No. 40;		
Matches 6;	Conservative	3;	Mismatches 10;	Indels 0;
				Gaps 0;

```

QY      13 FPRYPVGKFFQYDTPWKQT 31
      :| | : | | |
Db      99 YPHYGGSSHWYFDVWGQGT 117

```

```

RESULT 14
US-11-251-465-25
; Sequence 25, Application US/11251465
; Publication No. US20060094061A1
; GENERAL INFORMATION:
; APPLICANT: Brys, Reginald
; APPLICANT: Vandeghinste, Nick
; APPLICANT: Tomme, Peter
; APPLICANT: Klaassen, Hubertus
; TITLE OF INVENTION: Molecular Targets And Compounds, And Methods To Identify The
; TITLE OF INVENTION: Same, Useful In The Treatment Of Joint Degenerative And
; TITLE OF INVENTION: Inflammatory Diseases
; FILE REFERENCE: P30,172-A USA
; CURRENT APPLICATION NUMBER: US/11/251,465
; CURRENT FILING DATE: 2005-10-14
; PRIOR APPLICATION NUMBER: 60/619,384
; PRIOR FILING DATE: 2004-10-15
; NUMBER OF SEQ ID NOS: 880
; SOFTWARE: PatentIn version 3.3
; SEQ ID NO 25
; LENGTH: 365
; TYPE: PR1
; ORGANISM: Homo sapiens
; US-11-251-465-25

```

Query Match	19.9%	Score 38:	DB 7;	Length 365;
Best Local Similarity	39.3%	Pred. No.	1.6e+02;	
Matches 11, Conservative	3;	Mismatches	14;	Indels 0;
				Gaps 0;

QY 1 DVSTPEPTLPDNEFRPRYPVGKFFQYDTWK 28  
|||:|:|:|  
Db 89 DVFTPASSLRNFYDFLVMPEMOTDLQ 116

RESULT 15  
US-10-505-928-300  
; Sequence 300, Application US/10505928  
; Publication No. US2006008853A1  
; GENERAL INFORMATION:  
; APPLICANT: Ludwig Institute for Cancer Research et al  
; TITLE OF INVENTION: LYMPHATIC ENDOTHELIAL GENES  
; FILE REFERENCE: 28967/39178  
; CURRENT APPLICATION NUMBER: US/10/505,928  
; CURRENT FILING DATE: 2004-08-27  
; PRIOR APPLICATION NUMBER: US 60/363,019

```

: PRIOR FILING DATE: 2002-03-07
: NUMBER OF SEQ ID NOS: 866
: SOFTWARE: PatentIn 3.2
: SEQ ID NO 300
: LENGTH: 847
: TYPE: PRT
: ORGANISM: Homo sapiens
US-10-505-928-300

```

Query Match 19.9%; Score 38; DB 6; Length 847;  
Best local similarity 53.3%;  
Pred. No. 4.6e+02;  
Matches 8; Conservative 2; Mismatches 5; Indels 0; Gaps 0

```

QY      4 TRPTVLPDNFPRYPV 18
          |||||: |||
Db     376 TNHTVLPALERWPV 390

```

Search completed: May 21, 2006, 12:54:00  
Job time : 4 secs

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GenCore version 5.1.8  
Copyright (c) 1993 - 2006 Bioceleration Ltd.

OM protein - protein search, using sw model

Run on: May 21, 2006, 12:31:21 ; Search time 120.333 Seconds  
(without alignments)  
129.186 Million cell updates/sec

Title: US-10-632-366-2

Perfect score: 184  
Sequence: 1 DVSTSGAVLPDPPRPVGVKFRFDTWRQSAGRL 34

Scoring table: BLOSUM62  
Gapop 10.0 , Gapext 0.5

Searched: 2589679 seqs, 457216429 residues

Total number of hits satisfying chosen parameters: 2589679

Minimum DB seq length: 0  
Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%  
Maximum Match 100%

Listing first 45 summaries

Database :

A\_Geneseq.8:\*  
1: geneseqp1980s:\*  
2: geneseqp1990s:\*  
3: geneseqp2000s:\*  
4: geneseqp2001s:\*  
5: geneseqp2002s:\*  
6: geneseqp2003as:\*  
7: geneseqp2003bs:\*  
8: geneseqp2004s:\*  
9: geneseqp2005s:\*  
10: geneseqp2006s:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

#### SUMMARIES

Result No.	Score	Query Match	Length	DB	ID	Description
1	184	100.0	34	4	AAB31482	Aab31482 Amino aci
2	184	100.0	34	4	ADM35842	Adm35842 Rat prept
3	184	100.0	34	8	ADM96217	Adm96217 Rat prept
4	184	100.0	180	5	ABR57375	Abb57375 Rat mucoc
5	184	100.0	180	7	ADD46366	Addd46366 Rat Prote
6	177	96.2	34	4	AAB31483	Aab31483 Amino aci
7	177	96.2	34	8	ADM35843	Adm35843 Mouse pre
8	177	96.2	34	8	ADM96216	Adm96216 Murine pr
9	177	96.2	353	8	ABO84530	Abob84530 Mouse can
10	142	77.2	34	4	AAB31481	Aab31481 Amino aci
11	142	77.2	34	8	ADM35841	Adm35841 Human pre
12	142	77.2	34	8	ADM96218	Adm96218 Human pre
13	142	77.2	35	4	AAB91207	Aab91207 Insulin a
14	142	77.2	155	9	AED59621	Aed59621 Human ins
15	142	77.2	156	9	ADV90292	Adv90292 Protease-
16	142	77.2	180	1	AAPE60579	Aape60579 Human pre
17	142	77.2	180	3	AAV70364	Aay70364 Insulin-1
18	142	77.2	180	5	ABG96345	Abg96345 Human ova
19	142	77.2	180	5	ABP54951	Abp54951 Human IGF
20	142	77.2	180	6	ABR48184	Abtr48184 Human bla
21	142	77.2	180	6	AAE33320	Aae33320 Human ins
22	142	77.2	180	7	ABU61624	Abu61624 Human ins
23	142	77.2	180	7	ADB80535	Adb80535 Ovarian c

24	142	77.2	180	7	ADD46367	Add46367 Human Pro
25	142	77.2	180	7	ADN38881	Adn38881 Cancer/an
26	142	77.2	180	8	ADR47499	Adr47499 Human IGF
27	142	77.2	180	8	ADH17912	Adh17912 Human ins
28	142	77.2	180	8	ADJ58605	Adj58605 Human ins
29	142	77.2	180	8	ADR08576	Adr08576 Human pro
30	142	77.2	180	8	ADR46399	Adr46399 Human ins
31	142	77.2	180	8	ABM81211	Abm81211 Tumour-as
32	142	77.2	180	8	ABO84532	Abob84532 Human can
33	142	77.2	180	8	ADQ39470	Adq39470 Human myo
34	142	77.2	180	9	ADY86802	Ady86802 Human IGF
35	142	77.2	180	9	AEA89444	Aea89444 Human ins
36	142	77.2	180	9	AED08781	Aed08781 Human ins
37	142	77.2	180	10	AER05090	Aef05090 Human ins
38	142	77.2	262	5	ABP69409	Abp69409 Human pol
39	142	77.2	275	9	AED74143	Aed74143 Human pla
40	138	75.0	33	4	AAB31484	Aab31484 Amino aci
41	138	75.0	180	1	AAPE93525	Aape93525 Sequence
42	135	73.4	30	4	AAB31487	Aab31487 Amino aci
43	135	73.4	31	4	AAB31486	Aab31486 Amino aci
44	135	73.4	32	4	AAB31485	Aab31485 Amino aci
45	133	72.3	34	4	AAB31480	Aab31480 Bioactive

#### ALIGNMENTS

RESULT 1  
ID AAB31482 standard; peptide; 34 AA.  
XX AAB31482;  
AC AAB31482;  
XX 20-APR-2001 (first entry)  
DT XX  
XX Amino acid sequence of rat preptin peptide.  
DE XX  
XX Bioactive peptide; preptin; pancreatic islet beta-cell;  
KW glucose-mediated insulin secretion; insulin synthesis; type II diabetes;  
KM glucose mediated insulin secretion.  
XX  
OS Rattus sp.  
XX  
XX WO200078805-A1.  
PD 28-DEC-2000.  
XX  
XX 19-JUN-2000; 2000MO-NZ000102.  
PF 18-JUN-1999; 99NZ-00336359.  
PR XX  
XX (COOP/) COOPER G J S.  
PA (BUCH/) BUCHANAN C M.  
XX  
PI Cooper GJS, Buchanan CM;  
XX  
DR WPI; 2001-112313/12.  
DR N-PSDB; AAF24866.  
XX  
PT New mammalian peptide with preptin functionality, useful for preventing  
or treating Type 2 diabetes mellitus by stimulating insulin secretion.  
PT  
XX  
PS Claim 4; Page 27; 51pp; English.  
XX  
XX The present sequence represents a rat preptin peptide. The peptide  
corresponds to Arg69-Ileu102 of the proIGF-II B peptide. Preptin is  
secreted by pancreatic islet beta-cells which enhances glucose-mediated  
CC insulin secretion. Preptin peptides and their analogues are useful in  
CC preparing medicaments for preventing or treating a condition which  
CC results in or involves deficient insulin synthesis, secretion or action  
CC e.g. type II diabetes. Antibodies specific to preptin peptides are useful  
in an immunological assay such as radioimmunoassay (RIA), IRMA  
CC (undefined) or Enzyme linked immunosorbent assay (ELISA) for

quantitatively measuring preptin in a biological fluid preferably in cerebrospinal fluid. Agonists or antagonists of preptin peptides are useful for modulating glucose mediated insulin secretion

Sequence 34 AA;

Query Match 100.0%; Score 184; DB 4; Length 34;  
Best Local Similarity 100.0%; Pred. No. 4,4e-20;  
Matches 34; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

1 DVSTSOAVLPDDPPRYVGKFFKFDTRWSAGRL 34  
1 DVSTSOAVLPDDPPRYVGKFFKFDTRWSAGRL 34

RESULT 2  
ADM35842  
ID ADM35842 standard; peptide; 34 AA.

ADM35842;  
03-JUN-2004 (first entry)

Rat preptin, SEQ ID NO:2, useful for treating beta-cell disorders.

Rat; preptin; pancreatic islet beta-cell; fibroblast; proliferation;  
differentiation; beta-cell disorder; diabetes; insulin resistance;  
insulin resistance; insulin secretion disorder; hyperglycaemia; wound;  
burns; ulcer; mucous membrane disruption;  
peripheral nervous system injury; Alzheimer's disease;  
Parkinson's disease; stroke; amyotrophic lateral sclerosis;  
muscular dystrophy; diabetic neuropathy; myocarditis;  
myocardial infarction; cardiac disease; acute renal insufficiency;  
ischaemia; antidiabetic; vulnerrary; antilucer; antiinflammatory;  
gastrintestinal; nocotropic; neuroprotective; antiparkinsonian;  
cerebroprotective; muscular; cardiac; nephrotropic; dermatological;  
protein therapy.

Rattus sp.

WO2004012761-A1.

12-FEB-2004.

01-AUG-2003; 2003WO-NZ000171.

01-AUG-2002; 2002NZ-00520536.

01-AUG-2002; 2002US-0400445P.

(PROT-) PROTETIX CORP LTD.

Cooper GJS, Buchanan CM, James GC;

WPI; 2004-157011/15.

Use of preptin, preptin analogs, preptin agonists, their salts or derivatives, for treating a mediated disease, disorder or condition mediated in whole or in part by beta-cells or beta-cell dysfunction, e.g. ulcers or inflammation.

Claim 2; SEQ ID NO 2; 63pp; English.

The invention relates to a method for treating a disorder mediated by pancreatic islet beta-cells or beta-cell dysfunction by administering preptin (ADM35841-ADM35843), preptin analogues, preptin agonists or salts or derivatives thereof. Preptin are able to stimulate the proliferation and differentiation of beta-cells and fibroblasts. CC Preptin, preptin analogues, preptin agonists, their salts and derivatives are useful in the treatment of internal or external injuries CC or wounds (e.g., burns, ulcers, surgical wounds or mucous membrane disruption); conditions characterised by decreased beta-cell mass or CC number; beta-cell mediated diseases (e.g., type 1 or type 2 diabetes); CC and conditions characterised by insulin resistance, undesirably low

insulin secretion, hyperglycaemia or post-prandial hyperglycaemia. They may also be used for treating and/or preventing peripheral nervous system injury; Alzheimer's disease; Parkinson's disease; stroke; amyotrophic lateral sclerosis; muscular dystrophy; diabetic neuropathy; CC myocardiopathies such as myocarditis and myocardial infarction; cardiac disease and acute attack; and acute renal insufficiency caused by CC ischaemia. They are additionally useful for increasing or maintaining beta-cell mass or beta-cell number; for stimulating beta-cell proliferation via cell differentiation or neogenesis; for increasing type CC -cell mass via cell differentiation or neogenesis; for decreasing cell death of motor neurons; for increasing muscular end plates; promoting the CC functional recovery of damaged sciatic nerves; preventing peripheral motor paralysis during or as a result of chemotherapy; and for improving CC myocardial function. The present sequence represents rat preptin, which is specifically claimed for use in the method of the invention.

Sequence 34 AA;

Query Match 100.0%; Score 184; DB 8; Length 34;  
Best Local Similarity 100.0%; Pred. No. 4,4e-20;  
Matches 34; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

1 DVSTSOAVLPDDPPRYVGKFFKFDTRWSAGRL 34  
1 DVSTSOAVLPDDPPRYVGKFFKFDTRWSAGRL 34

RESULT 3  
ADM96217  
ID ADM96217 standard; peptide; 34 AA.

ADM96217;

17-JUN-2004 (first entry)

Rat preptin peptide used to treat various bone conditions Seqid 2.

osteoblast growth; osteoblast apoptosis; preptin;

proinsulin-like growth factor II; osteoporosis; osteopenia;  
osteogenesis imperfecta; primary hyperparathyroidism; endocrine disorder;

corticosteroid treatment; autoimmune arthritis; drug use; rat.

Rattus sp.

WO2004012760-A1.

12-FEB-2004.

31-JUL-2003; 2003WO-NZ000168.

01-AUG-2002; 2002US-0400443P.

(AUCK-) AUCKLAND UNISERVICES LTD.

Cornish J, Reid IR, Cooper GJS, Buchanan CM;

WPI; 2004-157010/15.

Use of preptin, preptin analog or preptin agonist for treating a bone condition (e.g. osteoporosis or osteopenia), increasing or maintaining bone density, stimulating osteoblast growth, or modulating osteoblast apoptosis.

Claim 2; SEQ ID NO 2; 29pp; English.

This invention relates to a novel method for treating a bone condition. Specifically, it refers to increasing or maintaining bone density. The stimulating osteoblast growth, or modulating osteoblast apoptosis. The present invention comprises administering preptin, a preptin analogue or agonist thereof, which corresponds to residues Asp-69 to Leu-102 of the proinsulin-like growth factor II that is co-secreted with insulin from pancreatic islet beta cells in response to glucose. Accordingly, such compositions that exhibit osteopathic activities can be used to treat or

CC ameliorate diseases including osteoporosis, osteopenia, bone defects or  
CC osteogenesis imperfecta, as well as bone loss resulting from primary  
CC hyperparathyroidism, endocrine disorders, corticosteroid treatment,  
CC autoimmune arthritis or addictive drug use. This peptide sequence is the  
CC rat preproin peptide of the invention.

XX SQ Sequence 34 AA;

Query Match 100.0%; Score 184; DB 8; Length 34;  
Best Local Similarity 100.0%; Pred. No. 4, 4e-20;  
Matches 34; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 DVSTSQAVLPDDFPRYPVGKFKFKEDTWRQSGRL 34  
1 DVSTSQAVLPDDFPRYPVGKFKFKEDTWRQSGRL 34

RESULT 4  
ID ABB57375 standard; protein; 180 AA.  
XX ABB57375;

XX AC ABB57375;  
XX DT 07-AUG-2003 (revised)  
XX DT 08-MAR-2002 (first entry)

DE Rat mucocardial cell proliferation associated polypeptide SEQ ID NO 2.

KW Rat; heart; cardiact; myocardial necrosis; cardiac hypertrophy;  
KW cardiac insufficiency.

XX Rattus norvegicus.

XX PN WO200183705-A1.

XX PD 08-NOV-2001.

XX PF 27-APR-2001; 2001WO-JP003700.

XX PR 27-APR-2000; 2000JP-00126741.

XX PA (KYOW ) KYOWA HAKKO KOGYO KK.

XX PI Yamada Y, Sekine S, Kikuchi Y, Sakurada K;

XX DR WPI, 2002-075160/10.

XX DR N-PSDB; ABI99915.

PT Genes having differential expression in fetal and adult heart tissue  
PT useful for screening potential drugs for promoting repair of damage  
PT caused by myocardial necrosis.

XX PS Claim 53; Page 78-79; 171pp; Japanese.

CC The invention relates to gene sequences (ABI99915-ABI99934) having  
CC modified expression in fetal heart tissue as compared to adult heart  
CC tissue and the encoded proteins (ABB57375-ABB57392). The genes have  
CC cardiact activity and may be useful in the promotion of the repair of  
CC damage to heart tissue caused by myocardial necrosis. The gene sequences  
CC are useful for screening potential compounds for the ability to influence  
CC disease associated with myocardial necrosis. Drugs identified by the  
CC screening methods may be used to treat and prevent disease with which  
CC myocardial necrosis is associated, such as cardiac hypertrophy and  
CC cardiac insufficiency. Diagnosis of diseases such as those above is also  
CC disclosed. (Updated on 07-AUG-2003 to correct OS field.)

XX SQ Sequence 180 AA;

Query Match 100.0%; Score 184; DB 5; Length 180;  
Best Local Similarity 100.0%; Pred. No. 2, 8e-19;  
Matches 34; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 DVSTSQAVLPDDFPRYPVGKFKFKEDTWRQSGRL 34

DB 93 DVSTSQAVLPDDFPRYPVGKFKFKEDTWRQSGRL 126

RESULT 5  
ID ADD46366 standard; protein; 180 AA.  
XX ADD46366;

XX AC ADD46366;  
XX DT 29-JAN-2004 (first entry)

DE Rat Protein P01346, SEQ ID NO 12045.

KW Rat; pain; neuronal tissue; gene therapy; spinal segmental nerve injury;  
KW chronic constriction injury; CCI; spared nerve injury; SNI; Chung.

XX Rattus norvegicus.

XX PN WO2003016475-A2.

XX PD 27-FEB-2003.

XX PF 14-AUG-2002; 2002WO-US025765.

XX PR 14-AUG-2001; 2001US-0312147P.

XX PR 01-NOV-2001; 2001US-0346382P.

XX PR 26-NOV-2001; 2001US-033347P.

XX PA (GENO ) GEN HOSPITAL CORP.

XX PA (FARB ) BAYER AG.

XX PI Woolf C, D'urso D, Befort K, Costigan M;

XX DR WPI; 2003-268312/26.

XX DR GENBANK; P01346.

XX PS New composition comprising two or more isolated polypeptides, useful for  
XX PT preparing a medicament for treating pain in an animal.

XX PT Claim 1; Page; 1017pp; English.

CC The invention discloses a composition comprising two or more isolated rat  
CC or human polynucleotides or a polynucleotide which represents a fragment,  
CC derivative or allelic variation of the nucleic acid sequence. Also  
CC claimed are a vector comprising the novel polynucleotide, a host cell  
CC comprising the vector, a method for identifying a nucleotide sequence  
CC which is differentially regulated in an animal subjected to pain and a  
CC kit to perform the method, an array, a method for identifying an agent  
CC that increases or decreases the expression of the polynucleotide sequence  
CC that is differentially expressed in neuronal tissue of a first animal  
CC subjected to pain, a method for identifying a compound which regulates  
CC the expression of a polynucleotide sequence which is differentially  
CC expressed in an animal subjected to pain, a method for identifying a  
CC compound that regulates the activity of one or more of the  
CC polynucleotides, a method for producing a pharmaceutical composition, a  
CC method for identifying a compound or small molecule that regulates the  
CC activity in an animal of one or more of the polypeptides given in the  
CC specification, a method for identifying a compound useful in treating  
CC pain and a pharmaceutical composition comprising the one or more  
CC polypeptides or their antibodies. The polynucleotide or the compound that  
CC modulates its activity is useful for preparing a medicament for treating  
CC pain (e.g. spinal segmental nerve injury (Chung), chronic constriction  
CC injury (CCI) and spared nerve injury (SNI)) in an animal (e.g. gene  
CC therapy). The sequence presented is a rat protein (shown in Table 2 of  
CC the specification) which is differentially expressed during pain. Note:  
CC The sequence data for this patent did not form part of the printed  
CC specification, but was obtained in electronic form directly from WIPO at  
CC ftp.wipo.int/pub/published\_pct\_sequences.

XX SQ Sequence 180 AA;

Query Match 100.0%; Score 184; DB 7; Length 180;

Qy		1	DVSTSOAVLPDDPPRYPVGKFFPKEDTWRQSAGRL	34	
Db		93	DVSTSOAVLPDDPPRYPVGKFFPKEDTWRQSAGRL	126	
RESULT 6					
ID	AAB31483				
XX	AAB31483 standard; peptide; 34 AA.				
AC	AAB31483;				
XX					
DT	20-APR-2001 (first entry)				
XX					
DE	Amino acid sequence of mouse preptin peptide.				
XX					
KW	Bioactive peptide; preptin, pancreatic islet beta-cell,				
KM	glucose-mediated insulin secretion; insulin synthesis; type II diabetes;				
KW	glucose mediated insulin secretion.				
XX					
OS	Homo sapiens.				
XX					
PN	WO20078805-A1.				
PD	28-DEC-2000.				
PF	19-JUN-2000; 2000WO-NZ000102.				
PR	18-JUN-1999; 99NZ-0036359.				
XX					
PA	(COOP/) COOPER G J S.				
PA	(BUCH/) BUCHANAN C M.				
XX					
PI	Cooper GJS, Buchanan CM;				
DR	WPI, 2001-112313/12.				
DR	N-PESDB; AAF24867.				
PT	New mammalian peptide with preptin functionality, useful for preventing				
PT	or treating Type 2 diabetes mellitus by stimulating insulin secretion.				
XX					
PS	Claim 5; Page 27; slipp; English.				
CC	The present sequence represents a mouse preptin peptide. The peptide				
CC	corresponds to Arg69-Leu102 of the proIGF-II R peptide. Preptin is				
CC	secreted by pancreatic islet beta-cells which enhances glucose-mediated				
CC	insulin secretion. Preptin peptides and their analogues are useful in				
CC	preparing medicaments for preventing or treating a condition which				
CC	results in or involves deficient insulin synthesis, secretion or action				
CC	e.g. type II diabetes. Antibodies specific to preptin peptides are useful				
CC	in an immunological assay such as radioimmunoassay (RIA). IRMA				
CC	(undefined) or Enzyme linked immunosorbent assay (ELISA) for				
CC	quantitatively measuring preptin in a biological fluid preferably in				
CC	cerebrospinal fluid. Agonists or antagonists of preptin peptides are				
CC	useful for modulating glucose mediated insulin secretion				
SQ	Sequence 34 AA:				
Query Match	96.2%; Score 177; DB 4; Length 34;				
Best Local Similarity	94.1%; Pred. No. 5e-19;				
Matches	32; Conservative 2; Mismatches 0; Indels 0; Gaps 0;				
Qy	1 DVSTSOAVLPDDPPRYPVGKFFPKEDTWRQSAGRL	34			
Db	1 DVSTSOAVLPDDPPRYPVGKFFOYDTRQSAGRL	34			
RESULT 7					
ID	ADM35843				
ID	ADM35843 standard; peptide; 34 AA.				
XX					

XX	ADW35843;
DT	(first entry)
DE	Mouse preptin, SEQ ID NO:3, useful for treating beta-cell disorders.
XX	
KM	Mouse; murine; preptin; pancreatic islet beta-cell; fibroblast;
KM	proliferation; differentiation; beta-cell disorder; diabetes;
KM	insulin resistance; insulin resistance; insulin secretion disorder;
KM	hyperglycaemia; wound; burn; ulcer; mucous membrane disruption;
KM	peripheral nervous system injury; Alzheimer's disease;
KM	Parkinson's disease; stroke; amyotrophic lateral sclerosis;
KM	muscular dystrophy; diabetic neuropathy; myocardial infarction;
KM	myocardial infarction; cardiac disease; acute renal insufficiency;
KM	ischaemia; antidiabetic; vlnnerary; antiulcer; antiinflammatory;
KM	gastrointestinal; motropic; neuroprotective; antiparkinsonian;
KM	cerebroprotective; muscular; cardiant; nephrotropic; dermatological;
KM	protein therapy.
XX	
OS	Mus sp.
PN	WO2004012761-A1.
PD	12-FEB-2004.
PF	01-AUG-2003; 2003WO-NZ000171.
PR	01-AUG-2002; 2002NZ-00520536.
PR	01-AUG-2002; 2002US-0400445P.
PA	(PROT-) PROTOMIX CORP LTD.
XX	
PL	Cooper GJS, Buchanan CM, James GC;
DR	WPI; 2004-157011/15.
PT	Use of preptins, preptin analogs, preptin agonists, their salts or
PT	derivatives, for treating a mediated disease, disorder or condition
PT	mediated in whole or in part by beta-cells or beta-cell dysfunction, e.g.
PT	ulcers or inflammation.
PS	Claim 2; SEQ ID NO 3; 63pp; English.
CC	The invention relates to a method for treating a disorder mediated by
CC	pancreatic islet beta-cells or beta-cell dysfunction by administering
CC	preptins (ADM35841-ADM35843), preptin analogues, preptin agonists or
CC	salts or derivatives thereof. Preptins are able to stimulate the
CC	proliferation and differentiation of beta-cells and fibroblasts.
CC	Preptins, preptin analogues, preptin agonists, their salts and
CC	derivatives are useful in the treatment of internal or external injuries
CC	or wounds (e.g., burns, ulcers, surgical wounds or mucous membrane
CC	disruption); conditions characterised by decreased beta-cell mass or
CC	number; beta-cell mediated diseases (e.g., type 1 or type 2 diabetes);
CC	and conditions characterised by insulin resistance, undesirably low
CC	insulin secretion, hyperglycaemia or post-prandial hyperglycaemia. They
CC	may also be used for treating and/or preventing peripheral nervous system
CC	injury; Alzheimer's disease; Parkinson's disease; stroke; amyotrophic
CC	lateral sclerosis; muscular dystrophy; diabetic neuropathy;
CC	myocardioapathies such as myocarditis and myocardial infarction; cardiac
CC	disease and acute attack; and acute renal insufficiency caused by
CC	ischaemia. They are additionally useful for increasing or maintaining
CC	beta-cell mass or beta-cell number; for stimulating beta-cell
CC	proliferation via cell differentiation or neogenesis; for increasing type
CC	-cell mass via cell differentiation or neogenesis; for decreasing cell
CC	death of motor neurons; for increasing muscular end plates; promoting the
CC	functional recovery of damaged sciatic nerves; preventing peripheral
CC	motor paralysis during or as a result of chemotherapy; and for improving
CC	myocardial function. The present sequence represents mouse preptin, which
CC	is specifically claimed for use in the method of the invention.
XX	
SO	Sequence 34 AA;

Query Match      96.2%;    Score 177;    DB 8;    Length 34;





Query Match 96.2%; Score 177; DB 8; Length 353;  
 Best Local Similarity 94.1%; Pred. No. 6.7e-18;  
 Matches 32; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

QY 1 DVSTSOAVLPDDPPRPYVGKFFKFDPTWRQSGRL 34  
 |||||  
 DB 266 DVSTSOAVLPDDPPRPYVGKFFQYDTWRQSGRL 299  
 |||||

RESULT 10  
 AAB31481  
 ID AAB31481 standard; peptide; 34 AA.  
 XX AAB31481;  
 AC AAB31481;  
 XX  
 XX  
 DT 20-APR-2001 (first entry)  
 XX  
 XX Amino acid sequence of human preproinsulin peptide.  
 DE  
 XX  
 XX Bioactive peptide; preproinsulin; pancreatic islet beta-cell;  
 KW glucose-mediated insulin secretion; insulin synthesis; type II diabetes;  
 KW glucose mediated insulin secretion.  
 XX  
 OS Homo sapiens.  
 XX  
 PN WO200078805-A1.  
 XX  
 PD 28-DEC-2000.  
 XX  
 PF 19-JUN-2000; 2000WO-NZ000102.  
 XX  
 PR 18-JUN-1999; 99NZ-00336359.  
 XX  
 PA (COOP/) COOPER G J S.  
 PA (BUCH/) BUCHANAN C M.  
 XX  
 PI Cooper GJS, Buchanan CM;  
 XX  
 DR WPI; 2001-112313/12.  
 XX  
 DR N-PSDB; AAF24865.  
 XX  
 PT New mammalian peptide with preproinsulin functionality, useful for preventing  
 PT or treating Type 2 diabetes mellitus by stimulating insulin secretion.  
 PS  
 XX Claim 3; Page 27; 51pp; English.

The present sequence represents a human preproinsulin peptide. The peptide  
 corresponds to Arg69-Leu102 of the proIGF-II B peptide. Preproinsulin is  
 secreted by pancreatic islet beta-cells which enhances glucose-mediated  
 insulin secretion. Preproinsulin peptides and their analogues are useful in  
 preventing diabetes mellitus for preventing or treating a condition which  
 results in or involves deficient insulin synthesis, secretion or action  
 e.g. type II diabetes. Antibodies specific to preproinsulin peptides are useful  
 in an immunological assay such as radioimmunoassay (RIA), IRMA  
 (undefined) or Enzyme linked immunosorbent assay (ELISA) for  
 quantitatively measuring preproinsulin in a biological fluid preferably in  
 cerebrospinal fluid. Agonists or antagonists of preproinsulin peptides are  
 useful for modulating glucose mediated insulin secretion

Query Match 77.2%; Score 142; DB 4; Length 34;  
 Best Local Similarity 73.5%; Pred. No. 9.8e-14;  
 Matches 25; Conservative 4; Mismatches 5; Indels 0; Gaps 0;

QY 1 DVSTSOAVLPDDPPRPYVGKFFKFDPTWRQSGRL 34  
 |||||  
 DB 1 DVSTPPTVLPDNPFRYPVGKFFQYDTWRQSGRL 34  
 |||||

ID ADM35841 standard; peptide; 34 AA.  
 XX  
 AC ADM35841;  
 XX  
 DT 03-JUN-2004 (first entry)  
 XX  
 DE Human preproinsulin, SEQ ID NO:1, useful for treating beta-cell disorders.  
 XX  
 KW Human; preproinsulin; pancreatic islet beta-cell; fibroblast; proliferation;  
 KW differentiation; beta-cell disorder; diabetes; insulin resistance;  
 KW insulin resistance; insulin secretion disorder; hyperglycaemia; wound;  
 KW burn; ulcer; mucous membrane disruption;  
 KW peripheral nervous system injury; Alzheimer's disease;  
 KW Parkinson's disease; stroke; amyotrophic lateral sclerosis;  
 KW muscular dystrophy; diabetic neuropathy; myocarditis;  
 KW myocardial infarction; cardiac disease; acute renal insufficiency;  
 KW ischaemia; antidiabetic; vulvar; antidiabetic; anti-inflammatory;  
 KW gastrointestinal; neuroprotective; antiparkinsonian;  
 KW cerebroprotective; muscular; cardiac; nephroprotective; dermatological;  
 KW protein therapy.  
 KW  
 XX  
 OS Homo sapiens.  
 XX  
 PN WO2004012761-A1.  
 XX  
 PD 12-FEB-2004.  
 XX  
 PF 01-AUG-2003; 2003WO-NZ000171.  
 XX  
 PR 01-AUG-2002; 2002NZ-00520536.  
 XX  
 PR 01-AUG-2002; 2002US-0400445P.  
 XX  
 PA (PROT-) PROTEMIX CORP LTD.  
 XX  
 PI Cooper GJS, Buchanan CM, James GC;  
 XX  
 DR WPI; 2004-157011/15.  
 XX  
 PT Use of preproinsulin, preproinsulin analogs, preproinsulin agonists, their salts or  
 PT derivatives, for treating a mediated disease, disorder or condition  
 PT mediated in whole or in part by beta-cells or beta-cell dysfunction, e.g.  
 PT ulcers or inflammation.  
 XX  
 PS Claim 2; SEQ ID NO 1; 63pp; English.

The invention relates to a method for treating a disorder mediated by  
 pancreatic islet beta-cells or beta-cell dysfunction by administering  
 preproinsulin (ADM35841-ADM35843), preproinsulin analogs, preproinsulin agonists or  
 salts or derivatives thereof. Preproinsulin are able to stimulate the  
 proliferation and differentiation of beta-cells and fibroblasts.  
 Preproinsulin, preproinsulin analogs, preproinsulin agonists, their salts and  
 derivatives are useful in the treatment of internal or external injuries  
 or wounds (e.g., burns, ulcers, surgical wounds or mucous membrane  
 disruption); conditions characterised by decreased beta-cell mass or  
 number; beta-cell mediated diseases (e.g., type 1 or type 2 diabetes);  
 and conditions characterised by insulin resistance, undesirably low  
 insulin secretion, hyperglycaemia or post-prandial hyperglycaemia. They  
 may also be used for treating and/or preventing peripheral nervous system  
 injury; Alzheimer's disease; Parkinson's disease; stroke; amyotrophic  
 lateral sclerosis; muscular dystrophy; diabetic neuropathy;  
 CC myocardopathies such as myocarditis and myocardial infarction; cardiac  
 disease and acute attack; and acute renal insufficiency caused by  
 ischaemia. They are additionally useful for increasing or maintaining  
 beta-cell mass or beta-cell number; for stimulating beta-cell  
 proliferation via cell differentiation or neogenesis; for decreasing cell  
 death of motor neurons; for increasing muscular end plates; promoting the  
 functional recovery of damaged sciatic nerves; preventing peripheral  
 motor paralysis during or as a result of chemotherapy; and for improving  
 myocardial function. The present sequence represents human preproinsulin, which  
 is specifically claimed for use in the method of the invention.

Sequence 34 AA;

Query Match 77.2%; Score 142; DB 8; Length 34;  
Best Local Similarity 73.5%; Pred. No. 9.8e-14;  
Matches 25; Conservative 4; Mismatches 5; Indels 0; Gaps 0;

QY 1 DVSTSQAVLPDDFPRYPVGKFFKFDTRWOSAGRL 34  
1 DVSTPPTVLDPDNFPRYPVGKFFQYDTWKOSTORL 34  
DB

RESULT 12  
ADM96218  
ID ADM96218 standard; peptide; 34 AA.  
XX  
AC ADM96218;  
XX  
DT 17-JUN-2004 (first entry)  
XX  
DE Human preptin peptide used to treat various bone conditions SeqID 3.

XX  
XX osteoblast growth; osteoblast apoptosis; preptin;  
KW osteoblast growth factor II; osteopathic; osteoporosis; osteopenia;  
KW osteogenesis imperfecta; primary hyperparathyroidism; endocrine disorder;  
XX corticosteroid treatment; autoimmune arthritis; drug use; human.  
XX  
OS Homo sapiens.  
XX  
PN WO2004012760-A1.  
XX  
PD 12-FEB-2004.  
XX  
PF 31-JUL-2003; 2003WO-NZ000168.  
XX  
PR 01-AUG-2002; 2002US-0400443P.  
XX  
PA (AUCK-) AUCKLAND UNISERVICES LTD.  
XX  
PI Cornish J, Reid IR, Cooper GJS, Buchanan CM;  
XX  
DR WPI; 2004-157010/15.

XX  
PT Use of preptin, preptin analog or preptin agonist for treating a bone  
PT condition (e.g. osteoporosis or osteopenia), increasing or maintaining  
PT bone density, stimulating osteoblast growth, or modulating osteoblast  
PT apoptosis.  
XX  
XX  
PS Claim 2; SEQ ID NO 3; 29pp; English.  
XX

XX This invention relates to a novel method for treating a bone condition.  
CC Specifically, it refers to increasing or maintaining bone density,  
CC stimulating osteoblast growth, or modulating osteoblast apoptosis. The  
CC present invention comprises administering preptin, a preptin analogue or  
CC agonist thereof, which corresponds to residues Asp-69 to Leu-102 of the  
CC proinsulin-like growth factor II that is co-secreted with insulin from  
CC pancreatic islet beta cells in response to glucose. Accordingly, such  
CC compositions that exhibit osteopathic activities can be used to treat or  
CC ameliorate diseases including osteoporosis, osteopenia, bone defects or  
CC osteogenesis imperfecta, as well as bone loss resulting from primary  
CC hyperparathyroidism, endocrine disorders, corticosteroid treatment,  
CC autoimmune arthritis or addictive drug use. This peptide sequence is the  
CC human preptin peptide of the invention.  
XX  
XX

XX  
SQ Sequence 34 AA;

Query Match 77.2%; Score 142; DB 8; Length 34;  
Best Local Similarity 73.5%; Pred. No. 9.8e-14;  
Matches 25; Conservative 4; Mismatches 5; Indels 0; Gaps 0;

QY 1 DVSTSQAVLPDDFPRYPVGKFFKFDTRWOSAGRL 34  
1 DVSTPPTVLDPDNFPRYPVGKFFQYDTWKOSTORL 34  
DB

## RESULT 13

AAB91207  
ID AAB91207 standard; peptide; 35 AA.  
XX  
AC AAB91207;  
XX

DT 22-JUN-2001 (first entry)

DE Insulin and insulin-like peptide SEQ ID NO:381.

XX  
XX Protection; endogenous therapeutic peptide; peptidase; conjugation;  
KW blood component; modification; succinimidyl; maleimido group; amino;  
KW hydroxyl; thiol; hormone; growth factor; neurotransmitter.

XX  
OS Homo sapiens.  
OS Synthetic.  
XX

PN WO200069900-A2.

XX  
PD 23-NOV-2000.

XX  
PF 17-MAY-2000; 2000WO-US013576.

XX  
PR 17-MAY-1999; 99US-0134406P.

XX  
PR 10-SEP-1999; 99US-0153406P.

XX  
PR 15-OCT-1999; 99US-0159783P.

XX  
PA (CONU-) CONJUCHEM INC.

XX  
PI Bridon DP, Ezrin AM, Milner PG, Holmes DL, Thibaudau K;

XX  
DR WPI; 2001-112059/12.

XX  
PT Modifying and attaching therapeutic peptides to albumin prevents  
PT peptidase degradation, useful for increasing length of in vivo activity.

XX  
PS Disclosure; Page 321-322; 733pp; English.

XX The present invention describes a modified therapeutic peptide (I)  
CC comprising a therapeutically active amino acid region (III) and a  
CC reactive group (II) (e.g. succinimidyl and maleimido groups) attached to  
CC a less therapeutically active amino acid region (IV), which covalently  
CC bonds with amino/hydroxyl/thiol groups on blood components to form a  
CC peptidease stabilized therapeutic peptide composed of 3-50 amino acids.  
CC (I) are useful for modifying therapeutic peptides e.g. hormones, growth  
CC factors and neurotransmitters, to protect them from peptidase activity in  
CC vivo for the treatment of various disorders. Endogenous therapeutic  
CC peptides are not suitable as drug candidates as they require frequent  
CC administration due to rapid degradation by peptidases in the body.  
CC Modifying and attaching therapeutic peptides to albumin prevents or  
CC reduces the action of peptidases to increase length of activity (half  
CC life) and specificity as bonding to large molecules decreases  
CC intracellular uptake and interference with physiological processes.  
CC AAB90829 to AAB92441 represent peptides which can be used in the  
CC exemplification of the present invention  
XX  
XX

XX  
SQ Sequence 35 AA;

Query Match 77.2%; Score 142; DB 4; Length 35;  
Best Local Similarity 73.5%; Pred. No. 1e-13;  
Matches 25; Conservative 4; Mismatches 5; Indels 0; Gaps 0;

QY 1 DVSTSQAVLPDDFPRYPVGKFFKFDTRWOSAGRL 34  
1 DVSTPPTVLDPDNFPRYPVGKFFQYDTWKOSTORL 35  
DB

RESULT 14  
AEDS9621  
ID AEDS9621 standard; protein; 155 AA.  
XX  
AC AEDS9621;  
XX

XX

DT	29-DEC-2005	(first entry)
DE	Human insulin growth factor 2 (IGF2) polypeptide.	
XX		
KW	insulin growth factor 2; IGF2; cell growth; cell differentiation.	
XX		
OS	Homo sapiens.	
XX		
PN	IN9900401-14.	
XX		
PD	04-MAR-2005.	
XX		
PF	07-APR-1999; 99IN-CH000401.	
XX		
PR	07-APR-1999; 99IN-CH000401.	
XX		
PA	(ZYMO ) ZYMOGENETICS INC.	
PI	Conklin DC, Lofton-Day CE, Lok SI, Jaspers SR,	
DR	WPI, 2005-557657/57.	
XX		
PT	Insulin homologs.	
XX		
PS	Disclosure; Fig 1; 78pp; English.	
CC	The invention relates to polynucleotide and polypeptide sequences for a	
CC	novel insulin homolog referred to as zins3. The polynucleotide sequences	
CC	encoding the zins3 polypeptides are located on chromosome 12. The present	
CC	invention also includes antibodies to the zins3 polypeptides. The zins3	
CC	polynucleotide and polypeptide sequences of the invention are useful for	
CC	identifying and isolating receptors involved in growth and	
CC	differentiation of zins3 responsive cells. This sequence represents human	
CC	insulin growth factor 2 (IGF2) that shows homology to human zins3.	
XX		
SQ	Sequence 155 AA;	
Query Match	77.2%; Score 142; DB 9; Length 155;	
Best Local Similarity	73.5%; Pred. No. 5.3e-13;	
Matches	25; Conservative 4; Mismatches 5; Indels 0; Gaps 0	
Qy	1 DVSTSGAVLPDDPFRYPVGKFPFKEDTWRGAGRL 34      :::     :::   ::   93 DVSTPPTVLPDNPRIYPVGKFFGYDWKGSTORL 126	
Dd		
RESULT 15		
ID	ADV90292	
AD	ADV90292 standard; protein; 156 AA.	
XX		
AC	ADV90292;	
XX		
DT	10-MAR-2005 (first entry)	
XX		
DE	Protease-hydrolysed polypeptide #69.	
XX		
KW	Proteases; immune disorder; inflammation; musculoskeletal disease;	
KW	dermatological disease; gastrointestinal disease; endocrine disease;	
KW	metabolic disorder; cancer; hematological disease;	
KW	cardiovascular disease; neurological disease; neurodegenerative disease;	
KW	growth disorder; respiratory disease; genitourinary disease;	
KW	gastrointestinal disorder; nutritional disorder; infection; cytostatic;	
KW	antiarthritic; osteopathic; antidiabetic; nephrotropic;	
KW	cardiovascular-gen.; immunosuppressive; respiratory-gen.; antipsoriatic;	
KW	antiallergic; dermatological; enzyme; hydrolysis.	
XX		
OS	Homo sapiens.	
XX		
PN	WO2004113522-A1.	
XX		
PD	29-DEC-2004.	
XX		

```

XX 18-JUN-2004; 2004WO-EP051173.
PR 18-JUN-2003; 2003EP-00013819.
PR 10-NOV-2003; 2003EP-00025851.
PR 11-NOV-2003; 2003EP-00025871.
PR 11-FEB-2004; 2004EP-00003058.
PA (DIRE-) DIREVO BIOTECH AG.
PI
PI Haupts U, Koltermann A, Scheidtg A, Voetsmeier C, Ketting U;
XX WPI; 2005-057985/06.
XX
XX Processes with defined specificity for a target substrate useful for
PT treating a specific disease related to the target substrate, such as
PT cancer, asthma, diabetes, inflammatory disorders and psoriasis.
XX
XX Claim 30; SEQ ID NO 122; 250bp; English.
XX
XX The invention relates to the use of a protease with defined specificity
CC for a target substrate for preparing a medicament for the treatment of a
CC specific disease related to the target substrate. The invention also
CC relates to a pharmaceutical or diagnostic composition comprising one or
CC more enzymes in the use cited, optionally comprising pharmaceutically or
CC diagnostically acceptable carriers, excipients and/or auxiliary agents, a
CC method for cleaving a target substrate in vivo or in vitro comprising
CC contacting the target substrate with a protease as cited in the use
CC mentioned, and a method for treatment of a disease in a patient connected
CC with a specific target substrate comprising administering to the patient
CC a protease with defined specificity for the specific target substrate.
CC The protease hydrolyzes the target substrate and eliminates or reduces
CC one or more biological activities, physico-chemical properties or
CC pharmacological properties of the target protein and/or activates or
CC increases one or more biological activities, physico-chemical properties
CC or pharmacological properties of the target protein, and/or adds one or
CC more biological activities, physico-chemical properties or
CC pharmacological properties to the target protein. The protease may be
CC administered to treat immune disorders, inflammatory disorders,
CC musculoskeletal diseases, dermatological diseases, gastrointestinal
CC diseases, endocrine diseases, metabolic disorder, cancers, hematological
CC diseases, cardiovascular diseases, neurological diseases,
CC neurodegenerative diseases, growth disorders, respiratory diseases,
CC genitourinary diseases, gynecological disorders, nutritional disorders
CC and infections. This sequence represents a polypeptide hydrolysed by a
CC protease used in the scope of the invention.
XX
XX Sequence 156 AA;
SQ
XX
XX Query Match: 77.2%; Score 142; DB 9; Length 156;
XX Best Local Similarity 73.5%; Pred. No: 5.3e-13;
XX Matches 25; Conservative 4; Mismatches 5; Indels 0; Gaps 0;
XX
XX 1 DVSTSOAVLPDDPPRYPVGKFFKPDWMOAGRL 34
XX ||||| ||||| ||||| ||||| ||||| |||||
XX 69 DVSTPEPTVLPDNPFRYPVGKFFKPDWMOAGRL 102

```

GenCore version 5.1.8  
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OM protein - protein search, using sw model

Run on: May 21, 2006, 12:37:56 ; Search time 19.6667 Seconds

(without alignments)  
166.341 Million cell updates/sec

Title: US-10-632-366-2

Perfect score: 184  
Sequence: 1 DVTSQAVLPDDPRYPVGKFKEDTWRSAGRL 34

Scoring table: BLOSUM62  
Gapop 10.0 , Gapext 0.5

Searched: 283416 seqs, 9621673 residues

Total number of hits satisfying chosen parameters: 283416

Minimum DB seq length: 0  
Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%  
Maximum Match 100%

Listing first 45 summaries

Database :

1: p1r1:\*  
2: p1r2:\*  
3: p1r3:\*  
4: p1r4:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

#### SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	184	100.0	180	1 IGR72	insulin-like growth
2	177	96.2	180	2 A24913	insulin-like growth
3	148	80.4	128	2 I57671	insulin-like growth
4	147	79.9	181	2 B60738	insulin-like growth
5	142	77.2	180	1 IGHU2	insulin-like growth
6	142	77.2	183	2 I67610	insulin-like growth
7	142	77.2	183	2 S02423	insulin-like growth
8	128	69.6	179	2 S04858	insulin-like growth
9	120	65.2	155	1 IGB02	insulin-like growth
10	91	49.5	93	2 I53642	insulin-like growth
11	53.5	29.1	498	2 S56868	probable membrane
12	52.5	28.5	2109	2 T31352	hypothetical prote
13	52	28.3	613	2 S66977	hypothetical prote
14	51	27.7	556	2 F64405	methyl coenzyme M
15	50.5	27.4	575	2 G86231	hypothetical prote
16	50	27.2	205	2 AG1345	hypothetical prote
17	50	27.2	1698	2 T13800	coracle gene prote
18	49	26.6	483	2 S25606	bleomycin hydrolas
19	49	26.6	522	2 D96913	GPase, sulfate ad
20	49	26.6	638	2 S67605	hypothetical prote
21	49	26.6	864	2 JC4624	alpha-glucosidase
22	48.5	26.4	473	1 A38874	protein-tyrosinase
23	48.5	26.4	1230	2 S53974	hypothetical prote
24	48	26.1	132	2 S36196	hypothetical prote
25	48	26.1	241	2 T26909	hypothetical prote
26	48	26.1	343	2 G95300	hypothetical prote
27	47.5	25.8	627	2 G81719	signal peptidase,
28	47.5	25.8	197	1 YTBST	cuniamycin resist
29	47.5	25.8	214	2 B46244	insulin-like growth

30	47.5	25.8	383	2 T15698	hypothetical prote
31	47.5	25.8	1012	2 T00958	hypothetical prote
32	47.5	25.8	1037	2 D96786	protein F10A5.15 (
33	47	25.5	110	2 PH1024	19 heavy chain V r
34	47	25.5	117	2 E83998	hypothetical prote
35	47	25.5	171	2 AH3310	ribosomal RNA meth
36	47	25.5	247	2 T36178	hypothetical prote
37	47	25.5	377	2 T26965	hypothetical prote
38	47	25.5	396	2 PQ0813	glycoprotein E1 -
39	47	25.5	404	2 T37762	guanine trna-ribos
40	47	25.5	552	2 C64310	methyl coenzyme M
41	47	25.5	557	2 F69481	probable acid-CoA
42	47	25.5	568	2 S42225	major envelope gly
43	47	25.5	1043	2 H83329	probable RND efflu
44	47	25.5	1069	2 C85349	Ca2+-transporting
45	47	25.5	1093	2 T08551	Ca2+-transporting

#### ALIGNMENTS

RESULT 1  
IGR72  
insulin-like growth factor II precursor - rat  
N;Alternate names: IGF-II; multiplicative stimulating polypeptide  
C;Species: Rattus norvegicus (Norway rat)  
C;Date: 18-Dec-1981 #sequence\_revision 04-Dec-1986 #ext\_change 09-Jul-2004  
C;Accession: A25350; A25598; A93554; A92329; A92505; I60178; I58058; I52428; I57695; I5  
J;Frnzio, R.; Chiaricelli, L.; Brown, A.L.; Graham, D.E.; Reicher, M.M.; Bruni, C.B.  
J. Biol. Chem. 261, 17138-17149, 1986  
A;Title: Structure and expression of the rat insulin-like growth factor II (IGF-II) ge  
A;Reference number: A25350; PMID:87057436; PMID:3023383  
A;Accession: A25350  
A;Molecule type: DNA  
A;Residues: 1-180 <FRU>  
A;Cross-references: UNIPROT:P01346; UNIPARC:UPI000012D40E; GB:M13871; GB:J02637; NID:92  
R;Soares, M.B.; Turken, A.; Ishii, D.; Mills, L.; Episkopou, V.; Cotter, S.; Zetlin, S  
J. Mol. Biol. 192, 737-752, 1986  
A;Title: Rat insulin-like growth factor II gene. A single gene with two promoters expre  
A;Reference number: A25598; PMID:87226166; PMID:2438416  
A;Accession: A25598  
A;Molecule type: DNA  
A;Residues: 1-180 <SOA>  
A;Cross-references: UNIPARC:UPI000012D40E; GB:X02213; NID:956428; PIDN:CAA26136.1; PID:  
R;Bento Soares, M.; Ishii, D.N.; Efstratiadis, A.  
Nucleic Acids Res. 13, 1119-1134, 1985  
A;Title: Developmental and tissue-specific expression of a family of transcripts relate  
A;Reference number: A93554; PMID:85215534; PMID:3889836  
A;Accession: A93554  
A;Molecule type: mRNA  
A;Residues: 1-180 <BEN>  
A;Cross-references: UNIPARC:UPI000012D40E; GB:X02213; NID:956428; PIDN:CAA26136.1; PID:  
R;Margardt, H.; Todaro, G.J.; Henderson, L.E.; Oroszlan, S.  
J. Biol. Chem. 256, 6859-6865, 1981  
A;Title: Purification and primary structure of a polypeptide with multiplicative-stimul  
A;Reference number: A92329; PMID:81215670; PMID:7016879  
A;Accession: A92329  
A;Molecule type: protein  
A;Residues: 25-56; 'G', '58-91 <MAR>  
A;Cross-references: UNIPARC:UPI0000141BCA  
R;Hylk, V.W.; Teplow, D.B.; Kent, S.B.H.; Straus, D.S.  
J. Biol. Chem. 260, 14417-14420, 1985  
A;Title: Identification of a peptide fragment from the carboxyl-terminal extension regi  
A;Reference number: A92505; PMID:86033940; PMID:4055782  
A;Accession: A92505  
A;Molecule type: protein  
A;Residues: 92-180 <HYL>  
A;Cross-references: UNIPARC:UPI000017358F  
R;Ieno, T.; Takahashi, K.; Matsuguchi, T.; Endo, H.; Yamamoto, M.  
Biochim. Biophys. Acta 950, 411-419, 1998  
A;Title: Transcriptional deviation of the rat insulin-like growth factor II gene initial  
A;Reference number: I60178; PMID:89000793; PMID:3167060  
A;Accession: I60178

A>Status: preliminary; translated from GB/EMBL/DBJ  
A/Molecule type: mRNA  
A/Residues: 1-180 <RES>  
A/Cross-references: UNIPARC:UPI000012D40E; EMBL:X13101; NID:g56412; PIDN:CAA31493.1; PID  
R:Whitfield, H.J.; Bruni, C.B.; Frunzio, R.; Terrell, J.E.; Nissley, S.P.; Rechler, M.M.  
Nature 312, 277-280, 1984  
A/Title: Isolation of a cDNA clone encoding rat insulin-like growth factor- II precursor  
A/Reference number: I58058; MWID:85061532; PMID:6390212  
A/Accession: I58058  
A/Status: preliminary; translated from GB/EMBL/DBJ  
A/Molecule type: mRNA  
A/Residues: 62-180 <RE2>  
A/Cross-references: UNIPARC:UPI00001709GB; GB:M30273; NID:g204923; PIDN:AAA41432.1; PID:  
R:ieno, T.; Takahashi, K.; Matsuguchi, T.; Ikejiri, K.; Endo, H.; Yamamoto, M.  
Biochim. Biophys. Acta 1009, 27-34, 1989  
A/Title: Multiple polyadenylation sites in a large 3'-most exon of the rat insulin-like  
A/Reference number: I52428; MWID:90001243; PMID:2477062  
A/Accession: I52428  
A/Status: preliminary; translated from GB/EMBL/DBJ  
A/Molecule type: mRNA  
A/Residues: 103-180 <RE3>  
A/Cross-references: UNIPARC:UPI000000677; EMBL:X16703; NID:g288512; PIDN:CAA34674.1; PI  
R:Chiarotti, L.; Brown, A.L.P.; Frunzio, R.; Clemmons, D.R.; Rechler, M.M.; Bruni, C.B.  
Mol. Endocrinol. 2, 1115-1126, 1988  
A/Title: Structure of the rat insulin-like growth factor II transcriptional unit: Hetero  
ribonucleic acid splicing.  
A/Reference number: I57695; MWID:89127259; PMID:3221878  
A/Accession: I57695  
A/Status: preliminary; translated from GB/EMBL/DBJ  
A/Molecule type: DNA  
A/Residues: 103-180 <RE4>  
A/Cross-references: UNIPARC:UPI000000677; GB:M31221; NID:g206667; PIDN:AAA42046.1; PID:  
R:Rechler, M.M.; Bruni, C.B.; Whitfield, H.J.; Yang, Y.W.  
Cancer Cells 3, 131-138, 1985  
A/Title: Characterization of the biosynthetic precursor for rat insulin- like growth fac  
A/Reference number: I52680  
A/Accession: I52680  
A/Status: preliminary; translated from GB/EMBL/DBJ  
A/Molecule type: mRNA  
A/Residues: 27-56, 'G', 58-180 <RE5>  
A/Cross-references: UNIPARC:UPI000006983; GB:M38688; NID:g204925; PIDN:AAA41433.1; PID:  
C:Comment: Although structurally and functionally related to insulin, the insulin-like g  
ls; in vivo, their functions appear to differ. IGF-II is influenced by placental lactoge  
C/Genetics:  
A/Gene: IGFII  
A/Intons: 53/1; 102/3  
C:Superfamily: insulin  
C/Keywords: growth factor; mitogen; plasma  
F/1-24/Domain: signal sequence #status predicted <SIG>  
F/25-91/Product: insulin-like growth factor II (active) #status experimental <MAT>  
F/25-56/Domain: insulin B chain-like #status experimental <DOB>  
F/57-64/Domain: insulin connecting C peptide-like #status experimental <CPE>  
F/65-85/Domain: insulin A chain-like #status experimental <DOA>  
F/86-91/Domain: D peptide #status experimental <DDO>  
F/92-180/Domain: carboxyl-terminal propeptide (B peptide) #status experimental <CHE>  
F/33-71, 45-84, 70-75/Disulfide bonds: #status predicted

Query Match 100.0%; Score 184; DB 1; Length 180;  
Best Local Similarity 100.0%; Pred. No. 1, 8e-19;  
Matches 34; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 DVSTSQAVLPDDPFRYPVGKFKFDTWRQSAGRL 34  
DB 93 DVSTSQAVLPDDPFRYPVGKFKFDTWRQSAGRL 126

RESULT 2  
A24913  
insulin-like growth factor II precursor - mouse  
C/Species: Mus musculus (house mouse)  
C/Date: 07-Mar-1988 #sequence revision 07-Mar-1988 #text change 09-Jul-2004  
C/Accession: A24913, S35874, T48463, I48464, I59137, S35875  
R:Stempien, M.M.; Fong, N.M.; Rall, L.B.; Bell, G.I.

DNA 5, 357-361, 1986  
A/Title: Sequence of a placental cDNA encoding the mouse insulin-like growth factor II p  
A/Reference number: A24913; MWID:87053171; PMID:3780370  
A/Accession: A24913  
A/Molecule type: mRNA  
A/Residues: 1-180 <STB>  
A/Cross-references: UNIPROT:P09535; UNIPARC:UPI0000020A45; GB:M14951; GB:J04069; GB:M206  
A/Accession: S35874  
A/Status: preliminary  
A/Molecule type: DNA  
A/Residues: 1-52 <HO2>  
A/Cross-references: UNIPARC:UPI00011613C; EMBL:X71921; NID:g393422; PIDN:CAA50737.1; PI  
R:Holhuizen, P.E.; Cleutjens, C.B.; Veenstra, G.J.; van der Lee, F.M.; Koonen-Reemst, A  
Regul. Pept. 48, 77-89, 1993  
A/Title: Differential expression of the human, mouse and rat IGF-II genes.  
A/Reference number: I48463; MWID:94089965; PMID:8265819  
A/Accession: I48463  
A/Status: preliminary; translated from GB/EMBL/DBJ  
A/Molecule type: DNA  
A/Residues: 1-52 <RES>  
A/Cross-references: UNIPARC:UPI000011613C; EMBL:X71921; NID:g393422; PIDN:CAA50737.1; PI  
A/Accession: I48464  
A/Status: preliminary; translated from GB/EMBL/DBJ  
A/Molecule type: DNA  
A/Residues: 103-180 <RE3>  
A/Cross-references: UNIPARC:UPI000011613D; EMBL:X71922; NID:g393424; PIDN:CAA50738.1; PI  
R:Tollisen, S.E.; Sadow, J.L.; Kotwein, P.  
Proc. Natl. Acad. Sci. U.S.A. 86, 1543-1547, 1989  
A/Title: Coordinate expression of insulin-like growth factor II and its receptor during  
A/Reference number: I59137; MWID:89160812; PMID:2537977  
A/Accession: I59137  
A/Status: preliminary; translated from GB/EMBL/DBJ  
A/Molecule type: DNA  
A/Residues: 1-52 <RE2>  
A/Cross-references: UNIPARC:UPI00011613C; GB:M24633; NID:g34121; PIDN:AAA37923.1; PID  
C/Genetics:  
A/Gene: IGF-2  
C:Superfamily: insulin  
C/Keywords: growth factor

Query Match 96.2%; Score 177; DB 2; Length 180;  
Best Local Similarity 94.1%; Pred. No. 2e-18;  
Matches 32; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

QY 1 DVSTSQAVLPDDPFRYPVGKFKFDTWRQSAGRL 34  
DB 93 DVSTSQAVLPDDPFRYPVGKFKFDTWRQSAGRL 126

RESULT 3  
I57671  
insulin-like growth factor II - guinea pig  
C/Species: Cavia porcellus (guinea pig)  
C/Date: 02-Aug-1996 #sequence revision 02-Aug-1996 #text change 09-Jul-2004  
C/Accession: I57671  
R:Levinovitz, A.; Norstedt, G.; van den Berg, S.; Robinson, I.C.; Ekstrom, T.J.  
Mol. Cell. Endocrinol. 89, 105-110, 1992  
A/Title: Isolation of an insulin-like growth factor II cDNA from guinea pig liver: expr  
A/Reference number: I57671; MWID:93246007; PMID:1301379  
A/Accession: I57671  
A/Status: preliminary; translated from GB/EMBL/DBJ  
A/Molecule type: mRNA  
A/Residues: 1-128 <RES>  
A/Cross-references: UNIPROT:Q08279; UNIPARC:UPI000012D408; GB:S59899; NID:g300070; PIDN  
C:Superfamily: insulin

Query Match 80.4%; Score 148; DB 2; Length 128;  
Best Local Similarity 79.4%; Pred. No. 2.4e-14;  
Matches 27; Conservative 3; Mismatches 4; Indels 0; Gaps 0;

QY 1 DVSTSQAVLPDDPFRYPVGKFKFDTWRQSAGRL 34  
DB 93 DVSTSQAVLPDDPFRYPVGKFKFDTWRQSAGRL 126

```

RESULT 4
B60738
Insulin-like growth factor II precursor - pig
C:Species: Sus scrofa domestica (domestic pig)
C>Date: 28-Apr-1993 #sequence_revision 30-Sep-1993 #text_change 13-Nov-1998
C:Accession: S12614; B60738
R:Catchpole, I.R.; Engstrom, W.
Nucleic Acids Res. 18, 6430, 1990
A>Title: Nucleotide sequence of a porcine insulin-like growth factor II cDNA.
A:Reference number: S12614; MUID:91057136; PMID:2243790
A:Accession: S12614
A:Molecule type: mRNA
A:Residues: 1-181 <CNT>
A:Cross-references: UNIPARC:UPI0000176673
R:Francis, G.L.; Owens, P.C.; McNeill, K.A.; Wallace, J.C.; Ballard, F.J.
J. Endocrinol. 122, 681-687, 1989
A>Title: Purification, amino acid sequences and assay cross-reactivities of porcine insu
A:Reference number: A60738; MUID:9003035; PMID:2809477
A:Accession: B60738
A:Molecule type: Protein
A:Residues: 25-79, 'X', 81-91 <FRA>
A:Cross-references: UNIPARC:UPI0000176674
C:Superfamily: Insulin
F:1-24/Domain: signal sequence #status predicted <SIG>
F:25-91/Prodomain: insulin-like growth factor II #status experimental <MAT>
F:92-181/Domain: carboxyl-terminal propeptide (E peptide) #status predicted <CTP>
F:33-71,45-84,70-75/Disulfide bonds: #status predicted

Query Match          79.9%; Score 147; DB 2; Length 181;
Best Local Similarity 76.5%; Pred. No. 5e-14;
Matches 26; Conservative 4; Mismatches 4; Indels 0; Gaps 0;

QY      1 DVSTSQAVLPDPFPRYPVGKFFKFDITWROSGARL 34
      |||||  |||||  |||||  |||||  |||||  |||||
      93 DVSTPPTVLPDNPFRYPVGKFFKFDITWROSGARL 126

RESULT 5
IGHN2
Insulin-like growth factor II precursor [validated] - human
N:Alternate names: somatomedin A
C:Species: Homo sapiens (man)
C>Date: 24-Apr-1984 #sequence_revision 15-Nov-1984 #text_change 09-Jul-2004
C:Accession: B23614; A93339; A28300; A30155; A93338; A91448; B60483; A33845; A61
R:de Pagter-Holthuisen, P.; van Schaik, F.M.A.; Verduijn, G.M.; van Ommen, G.J.B.; Bouma
FEBS Lett. 195, 179-184, 1986
A>Title: Organization of the human genes for insulin-like growth factors I and II.
A:Reference number: A91356; MUID:86108862; PMID:3002851
A:Accession: B23614
A:Molecule type: DNA
A:Residues: 1-180 <DEP>
A:Cross-references: UNIPROT:P01344; UNIPARC:UPI0000000965
R:Dull, T.J.; Gray, A.; Hayflick, J.S.; Ullrich, A.
Nature 310, 777-781, 1984
A>Title: Insulin-like growth factor II precursor gene organization in relation to insulin
A:Reference number: A93339; MUID:84295593; PMID:6382022
A:Accession: A93339
A:Molecule type: DNA
A:Residues: 1-180 <DUL>
A:Cross-references: UNIPARC:UPI0000000965; GB:M14118; NID:g183094; PIDN:AAA52535.1; PID:
R:Arminger, J.C.; Rosen, K.M.; Humbel, R.E.; Villal-Komaroff, L.
Proc. Natl. Acad. Sci. U.S.A. 84, 6330-6334, 1987
A>Title: Tissue-specific expression of insulin-like growth factor II mRNAs with distinct
A:Reference number: A28300; MUID:87317645; PMID:3476948
A:Accession: A28300
A:Molecule type: mRNA
A:Residues: 1-180 <IRM>
A:Cross-references: UNIPARC:UPI0000000965; GB:M17426; NID:g189954; PIDN:AAA60088.1; PID:
R:Shen, S.J.; Dammou, M.; Wang, C.Y.; Jansen, M.; Ilan, J.
Proc. Natl. Acad. Sci. U.S.A. 85, 1947-1951, 1988
A>Title: Isolation of an insulin-like growth factor II cDNA with a unique 5' untranslated

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A:Reference number: A30155; MUID:86158110; PMID:2450353
A:Accession: A30155
A:Molecule type: mRNA
A:Residues: 1-180 <SHE>
A:Cross-references: UNIPARC:UPI0000000965; GB:J03242; NID:g183123; PIDN:AAA52545.1; PID
R:Higihara, K.; Kobayashi, T.; Tobita, M.; Kikyo, N.; Yazaki, Y.; Okabe, T.
Jpn. J. Cancer Res. 86, 202-207, 1995
A>Title: Isolation of a cDNA for a growth factor of vascular endothelial cells from hum
A:Reference number: I56957; MUID:95247546; PMID:7730145
A:Accession: I56957
A>Status: translated from GB/EMBL/DBJ
A:Molecule type: mRNA
A:Residues: 1-180 <HAG>
A:Cross-references: UNIPARC:UPI0000000965; GB:S77035; NID:g914191; PIDN:ABB34155.1; PID
R:Ball, G.L.; Mettweather, J.P.; Sanchez-Pescador, R.; Stempien, M.M.; Priestley, L.;
Nature 310, 775-777, 1984
A>Title: Sequence of a cDNA clone encoding human preproinsulin-like growth factor II.
A:Reference number: A93338; MUID:84295592; PMID:6382021
A:Accession: A93338
A:Molecule type: mRNA
A:Residues: 1-180 <BEL>
A:Cross-references: UNIPARC:UPI0000000965; GB:X00910; GB:M17862; NID:g32995; PIDN:CAA25
R:Rinderknecht, E.; Humbel, R.E.
FEBS Lett. 89, 283-286, 1978
A>Title: Primary structure of human insulin-like growth factor II.
A:Reference number: A91448; MUID:78191259; PMID:658418
A:Accession: A91448
A:Molecule type: Protein
A:Residues: 25-91 <RIN>
A:Cross-references: UNIPARC:UPI000002CB81
R:Karey, K.P.; Marguard, H.; Sirbasku, D.A.
Blood 74, 1084-1092, 1989
A>Title: Human platelet-derived mitogens. Identification of insulinlike growth factors
A:Reference number: A60483; MUID:89333462; PMID:2752153
A:Accession: B60483
A:Molecule type: Protein
A:Residues: 25-32, 'X', 34-44 <KAR>
A:Cross-references: UNIPARC:UPI000017358A
A:Experimental source: platelet lysate
R:Smith, M.C.; Cook, J.A.; Furman, T.C.; Occolowicz, J.L.
J. Biol. Chem. 264, 9314-9321, 1989
A>Title: Structure and activity dependence of recombinant human insulin-like growth fac
A:Reference number: A33845; MUID:89255428; PMID:2722836
A:Accession: A33845
A:Molecule type: Protein
A:Residues: 25-91 <SMI>
A:Cross-references: UNIPARC:UPI000002CB81
R:Moilan, S.
Growth Factors 2, 267-271, 1990
A>Title: A simple and efficient scheme for the purification of insulin-like growth fact
A:Reference number: A61037; MUID:90248152; PMID:2337472
A:Accession: A61037
A:Molecule type: Protein
A:Residues: 25-32 <MOH>
A:Cross-references: UNIPARC:UPI000017358B
A>Note: this protein was purified from bone, where it comprises 0.1 % of total protein
R:Jensen, M.; van Schaik, F.M.; van Tol, H.; Van den Brande, J.L.; Sussenbach, J.S.
FEBS Lett. 179, 243-246, 1985
A>Title: Nucleotide sequences of cDNAs encoding precursors of human insulin-like growth
A:Reference number: I53458; MUID:85102019; PMID:3881277
A:Accession: I53458
A>Status: translated from GB/EMBL/DBJ
A:Molecule type: mRNA
A:Residues: 1-180 <RES>
A:Cross-references: UNIPARC:UPI0000000965; GB:M17862; NID:g32995; PIDN:CAA25426.1; PID:
A>Note: an alternatively spliced form was also found, in which 53-ser is replaced by Arg.
R:Ball, L.B.; Scott, J.; Bell, G.L.
Meth. Enzymol. 146, 239-248, 1987
A>Title: Human insulin-like growth factor I and II messenger RNA: isolation of compleme
A:Reference number: I57044; MUID:88065102; PMID:3683205
A:Accession: I57045
A>Status: preliminary; translated from GB/EMBL/DBJ

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A/Molecule type: mRNA  
 A/Residues: 1-2, 'M', 4-180 <RES>  
 A/Cross-references: UNIPARC:UPI000016A990; GB:M29645; NID:g183121; PIDN:AA52544.1; PID:R.Gray, A.; Tam, A.W.; Dull, T.J.; Hayflick, J.; Pintar, J.; Cavenee, W.K.; Koulos, A.; DNA 6, 283-295, 1987  
 A/Title: Tissue-specific and developmentally regulated transcription of the insulin-like A/Reference number: I52978; MUID:88003966; PMID:3652904  
 A/Accession: I52978  
 A/Status: translated from GB/EMBL/DBJ  
 A/Molecule type: DNA  
 A/Residues: 1-52 <RES2>  
 A/Cross-references: UNIPARC:UPI000016A98E; GB:M22373; NID:g183100; PIDN:AA52536.1; PID: C/Genetics:  
 A/Gene: GDB:IGF2  
 A/Cross-references: GDB:119331; OMIM:147470  
 A/Map position: 11p15.5-11p15.5  
 C/Superfamily: Insulin  
 C/Keyword: alternative splicing; angiogenesis; growth factor; monomer  
 F/1-24/Domain: signal sequence #status predicted <SIG>  
 F/25-91/Product: insulin-like growth factor II #status experimental <MAT>  
 F/92-180/Domain: carboxyl-terminal propeptide (E peptide) #status predicted <CTP>  
 F/33-71,45-84,70-75/Disulfide bonds: #status experimental

Query Match 77.2%; Score 142; DB 1; Length 180;  
 Best Local Similarity 73.5%; Pred. No. 2,7e-13;  
 Matches 25; Conservative 4; Mismatches 5; Indels 0; Gaps 0;

QY 1 DVSTSQAVLPDDPPRYVGVKFKFEDTWRQSGRL 34  
 |||||  
 93 DVSTPPTVLPDNPFRYPVGVKFKFYDTWKQSTQRL 126  
 |||||

RESULT 6  
 167610  
 insulin-like growth factor II, domains A-E - human  
 C/Species: Homo sapiens (man)  
 C/Date: 04-Oct-1996 #sequence, revision 04-Oct-1996 #text\_change 16-Jul-1999  
 C/Accession: 167610  
 R./ansen, M.; van Schaik, F.M.; van Tol, H.; Van den Brande, J.L.; Sussenbach, J.S.  
 FEBS Lett. 179, 243-246, 1985  
 A/Title: Nucleotide sequences of cDNAs encoding precursors of human insulin-like growth A/Reference number: I53458; MUID:85102019; PMID:3881277  
 A/Accession: 167610  
 A/Status: preliminary; translated from GB/EMBL/DBJ  
 A/Molecule type: mRNA  
 A/Residues: 1-183 <RES>  
 A/Cross-references: UNIPARC:UPI000016A8B9; GB:M17863; NID:g182527; PIDN:AA52443.1; PID: C/Genetics:  
 A/Gene: GDB:IGF2  
 A/Cross-references: GDB:119331; OMIM:147470  
 A/Map position: 11p15.5-11p15.5  
 C/Superfamily: Insulin

Query Match 77.2%; Score 142; DB 2; Length 183;  
 Best Local Similarity 73.5%; Pred. No. 2,7e-13;  
 Matches 25; Conservative 4; Mismatches 5; Indels 0; Gaps 0;

QY 1 DVSTSQAVLPDDPPRYVGVKFKFEDTWRQSGRL 34  
 |||||  
 96 DVSTPPTVLPDNPFRYPVGVKFKFYDTWKQSTQRL 129  
 |||||

RESULT 7  
 S02423  
 insulin-like growth factor II precursor, splice form II - human  
 N/Alternate names: somatomedin A  
 C/Species: Homo sapiens (man)  
 C/Date: 28-Feb-1990 #sequence, revision 28-Feb-1990 #text\_change 09-Jul-2004  
 C/Accession: S02423; S03383; A34439  
 R./e Bouc, Y.; Noguiez, P.; Sondermeijer, P.; Dreyer, D.; Girard, F.; Binoux, M.  
 FEBS Lett. 222, 181-185, 1987  
 A/Title: A new 5'-non-coding region for human placental insulin-like growth factor II mRNA/Reference number: S02423; MUID:88005137; PMID:3653397

A/Accession: S02423  
 A/Status: not compared with conceptual translation  
 A/Molecule type: mRNA  
 A/Residues: 1-183 <RES1>  
 A/Cross-references: UNIPROT:P01344; UNIPARC:UPI00002AB8B; EMBL:Y00693  
 A/Note: 53-56 was also found instead of residues 53-56 (Arg-Leu-Pro-Gly)  
 R./de Pagter-Holhuizen, P.; Jansen, M.; van der Kammen, R.A.; van Schaik, F.M.A.; Susser Biochim. Biophys. Acta 950, 282-295, 1988  
 A/Title: Differential expression of the human insulin-like growth factor II gene. Chara A/Reference number: S03383; MUID:89000779; PMID:3167054  
 A/Accession: S03383  
 A/Status: translation not shown  
 A/Molecule type: DNA  
 A/Residues: 106-183 <DEP>  
 A/Cross-references: UNIPARC:UPI000016AAE7; EMBL:X07868; NID:g32998; PIDN:CAA30717.1; PID: R./Hampton, B.; Burgess, W.H.; Marshak, D.R.; Cullen, K.U.; Perdue, J.F.  
 J. Biol. Chem. 264, 19155-19160, 1989  
 A/Title: Purification and characterization of an insulin-like growth factor II variant A/Reference number: A34439; MUID:90037048; PMID:2553732  
 A/Accession: A34439  
 A/Molecule type: protein  
 A/Residues: 25-32, 'X', 34-44, 'X', 46-59 <HAM>  
 A/Cross-references: UNIPARC:UPI0000176678  
 C/Genetics:  
 A/Gene: GDB:IGF2  
 A/Cross-references: GDB:119331; OMIM:147470  
 A/Map position: 11p15.5-11p15.5  
 C/Superfamily: Insulin  
 C/Keyword: growth factor  
 F/1-24/Domain: signal sequence #status predicted <SIG>  
 F/25-94/Product: insulin-like growth factor II #status predicted <MAT>  
 F/25-59/Domain: insulin chain B-like #status experimental <DOB>  
 F/60-67/Domain: insulin connecting C peptide-like #status predicted <CEP>  
 F/68-86/Domain: insulin chain A-like #status predicted <DOA>  
 F/89-94/Domain: D peptide #status predicted <DOD>  
 F/95-183/Domain: carboxyl-terminal propeptide (E peptide) #status predicted <CTP>  
 F/33-74,45-87,73-78/Disulfide bonds: #status predicted

Query Match 77.2%; Score 142; DB 2; Length 183;  
 Best Local Similarity 73.5%; Pred. No. 2,7e-13;  
 Matches 25; Conservative 4; Mismatches 5; Indels 0; Gaps 0;

QY 1 DVSTSQAVLPDDPPRYVGVKFKFEDTWRQSGRL 34  
 |||||  
 96 DVSTPPTVLPDNPFRYPVGVKFKFYDTWKQSTQRL 129  
 |||||

RESULT 8  
 S04858  
 insulin-like growth factor II precursor - sheep  
 C/Species: Ovis orientalis aries, Ovis aries (domestic sheep)  
 C/Date: 07-Jun-1990 #sequence, revision 07-Jun-1990 #text\_change 09-Jul-2004  
 C/Accession: S04858; S10984; S20731; S04972; S32557; S32558; A6108; S08567  
 R./O'Mahoney, J.V.; Adams, T.E.  
 Nucleic Acids Res. 17, 5392, 1989  
 A/Title: Nucleotide sequence of an ovine insulin-like growth factor-II cDNA.  
 A/Reference number: S04858; MUID:89345107; PMID:2762134  
 A/Accession: S04858  
 A/Molecule type: mRNA  
 A/Residues: 1-179 <OMA>  
 A/Cross-references: UNIPROT:P10764; UNIPARC:UPI000012D40F; EMBL:X15248; NID:g1802; PIDN: R./Brown, W.M.; Diegelwetter, K.M.; Foreman, R.C.; Saunders, N.R.  
 Nucleic Acids Res. 18, 4614, 1990  
 A/Title: The nucleotide and deduced amino acid sequences of insulin-like growth factor A/Reference number: S10983; MUID:90356421; PMID:2388846  
 A/Accession: S10984  
 A/Molecule type: mRNA  
 A/Residues: 1179 <BRO>  
 A/Cross-references: UNIPARC:UPI000012D40F; EMBL:X53554; NID:g1262; PIDN:CAA37621.1; PID: R./Ohlsen, S.M.; Wong, E.A.  
 Submitted to the EMBL Data Library, September 1990  
 A/Reference number: S20731  
 A/Accession: S20731



A>Status: preliminary  
A:Molecule type: mRNA  
A:Residues: 1179 <OHL>  
A:Cross-references: UNIPARC:UPI000012D40F; EMBL:X55638; NID:g1266; PIDD:CAA3163.1; PID:R:Hey, A.W.; Browne, C.A.; Simpson, R.J.; Thorburn, G.D.  
A:Biochim. Biophys. Acta 997, 27-35, 1989  
A>Title: Simultaneous isolation of insulin-like growth factors I and II from adult sheep  
A:Reference number: S04972; MUID:89323215; PMID:2752053  
A:Accession: S04972  
A:Molecule type: protein  
A:Residues: 25-58 <HEV>  
A:Cross-references: UNIPARC:UPI0000176675  
R:Demmer, J.; Hill, D.F.; Petersen, G.B.  
A:Biochim. Biophys. Acta 1173, 79-80, 1993  
A>Title: Characterization of two sheep insulin-like growth factor II cDNAs with different  
A:Reference number: S32557; MUID:93250051; PMID:8485157  
A:Accession: S32557  
A>Status: nucleic acid sequence not shown; translation not shown  
A:Molecule type: mRNA  
A:Residues: 1-179 <DEM>  
A:Cross-references: UNIPARC:UPI000012D40F; EMBL:M83788; NID:g165940; PIDD:AAA31548.1; PID:A:Note: the nucleotide sequence was submitted to the EMBL Data Library, March 1992  
A:Accession: S32558  
A>Status: preliminary; nucleic acid sequence not shown; translation not shown  
A:Molecule type: mRNA  
A:Residues: 1120 <DE2>  
A:Cross-references: UNIPARC:UPI000016C4C4; EMBL:M83789; NID:g165942; PIDD:AAA31549.1; PID:A:Note: the nucleotide sequence was submitted to the EMBL Data Library, March 1992  
R:Strazek, J.; Heulin, M.H.; Chenuit, A.M.; Belleville, F.; Nabet, P.; Denoroy, L.; Bare  
J. Chromatogr. 533, 35-46, 1990  
A>Title: Application of preparative high-performance liquid chromatography to the purifi  
cation of  
A:Reference number: A61008; MUID:91185520; PMID:2081780  
A:Accession: A61008  
A:Molecule type: protein  
A:Residues: 25-32, 'X', 34-44, 'X', 46-55, 'X', 57, 'X', 59-60 <STR>  
A:Cross-references: UNIPARC:UPI0000176676  
A:Experimental source: fetal serum  
A:Experimental source: fetal serum  
R:Francis, G.L.; McNeill, K.A.; Wallace, J.C.; Ballard, F.J.; Owens, P.C.  
Endocrinology 124, 1173-1183, 1989  
A>Title: Sheep insulin-like growth factors I and II: sequences, activities and assays.  
A:Reference number: S07198; MUID:89136887; PMID:2537174  
A:Accession: S08567  
A:Molecule type: protein  
A:Residues: 25-45, 'D', 48-91 <FRA>  
A:Cross-references: UNIPARC:UPI0000176677  
A:Experimental source: fetal serum  
C:Superfamily: insulin  
C:Keywords: growth factor; plasma  
F:1-24/Domain: signal sequence #status predicted <SIG>  
F:25-91/Product: insulin-like growth factor II #status experimental <MAT>  
F:25-52/Domain: insulin chain B-like #status predicted <DOB>  
F:53-64/Domain: insulin connecting peptide-like #status predicted <CHC>  
F:65-85/Domain: insulin chain A-like #status predicted <DOA>  
F:86-91/Domain: D peptide #status predicted <CHD>  
F:92-179/Domain: carboxyl-terminal propeptide (E peptide) #status predicted <CPR>  
F:93-71, 45-84, 70-75/Disulfide bonds: #status predicted  
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Best Local Similarity 70.6%; Pred. No. 3e-11;  
Matches 24; Conservative 2; Mismatches 8; Indels 0; Gaps 0;

QY 1 DVSTQAVLPDDPPRPVVGKFFKFDTRWQAGRL 34  
DB 93 DVASSTVLPDDFTAVPVGKFFQSDTWKOSTORL 126

RESULT 9  
IGB02  
insulin-like growth factor II precursor - bovine  
N:Alternate names: IGF-II  
C:Species: Bos primigenius taurus (cattle)  
C>Date: 31-Mar-1988 #sequence\_revision 22-Apr-1995 #text\_change 09-Jul-2004

C:Accession: S10983; S37617; B25623; A34645; S00466; A57470  
R:Brown, W.M.; Dziegielewska, K.M.; Foreman, R.C.; Saunders, N.R.  
Nucleic Acids Res. 18, 4614, 1990  
A>Title: The nucleotide and deduced amino acid sequences of insulin-like growth factor  
A:Reference number: S10983; MUID:90356421; PMID:2388846  
A:Accession: S10983  
A:Molecule type: mRNA  
A:Residues: 6-155 <RR2>  
A:Cross-references: UNIPARC:UPI000016C328; EMBL:X53553; NID:g459; PIDD:A:Experimental source: liver  
R:Congote, L.F.; Mazza, L.; Palfree, R.G.E.  
Comp. Biochem. Physiol. B 103, 127-131, 1992  
A>Title: Nucleotide sequence of the central coding region of bovine erythropoietin/insulin  
time of hepatic erythropoiesis.  
A:Reference number: S37617; MUID:93083057; PMID:1280544  
A:Accession: S37617  
A:Molecule type: mRNA  
A:Residues: 6-62 <CON>  
A:Cross-references: UNIPARC:UPI000016C329; EMBL:X53867; NID:g461; PIDD:CAA37861.1; PID:R:Honninger, A.; Humbel, R.E.  
J. Biol. Chem. 261, 569-575, 1986  
A>Title: Insulin-like growth factors I and II in fetal and adult bovine serum. Purifica  
A:Reference number: A92585; MUID:86085881; PMID:3941093  
A:Accession: B25623  
A:Molecule type: protein  
A:Residues: 1-34, 'S', 36-67 <HON>  
A:Cross-references: UNIPARC:UPI000017358C  
R:Li, Q.; Blacher, R.; Esch, F.; Congote, L.F.  
Biochem. Biophys. Res. Commun. 166, 557-561, 1990  
A>Title: A heparin-binding erythroid cell stimulating factor from fetal bovine serum ha  
A:Reference number: A34645; MUID:90147754; PMID:2302223  
A:Accession: A34645  
A:Molecule type: protein  
A:Residues: 1-8, 'X', 10-20, 'X', 22-31 <LIQ>  
A:Cross-references: UNIPARC:UPI000017358D  
R:Francis, G.L.; Upton, F.M.; Ballard, F.J.; McNeill, K.A.; Wallace, J.C.  
Biochem. J. 251, 95-103, 1988  
A>Title: Insulin-like growth factors 1 and 2 in bovine colostrum. Sequences and biologi  
A:Reference number: S00465; MUID:88268820; PMID:3390164  
A:Accession: S00466  
A:Molecule type: protein  
A:Residues: 1-67 <FRA>  
A:Cross-references: UNIPARC:UPI0000141BC9  
R:Valenzano, K.J.; Remmler, U.; Lobel, P.  
J. Biol. Chem. 270, 16441-16448, 1995  
A>Title: Soluble insulin-like growth factor II/mannose 6-phosphate receptor carries mul  
A:Reference number: A57470; MUID:95332360; PMID:7608216  
A:Accession: A57470  
A>Status: preliminary  
A:Molecule type: protein  
A:Residues: 1-5 <VAL>  
A:Cross-references: UNIPARC:UPI000017358B  
C:Superfamily: insulin  
C:Keywords: colostrum; growth factor; heparin binding; mitogen; plasma  
F:1-67/Product: insulin-like growth factor II #status experimental <MAT>  
F:1-27/Domain: insulin chain B-like #status experimental <DOB>  
F:28-40/Domain: insulin connecting C peptide-like #status experimental <CPE>  
F:41-61/Domain: insulin chain A-like #status experimental <DOA>  
F:62-67/Domain: D peptide #status experimental <CHD>  
F:68-155/Domain: carboxyl-terminal propeptide (E peptide) #status predicted <CHE>  
F:9-47, 21-60, 46-51/Disulfide bonds: #status predicted  
Query Match 65.2%; Score 120; DB 1; Length 155;  
Best Local Similarity 64.7%; Pred. No. 3.9e-10;  
Matches 22; Conservative 3; Mismatches 9; Indels 0; Gaps 0;

QY 1 DVSTQAVLPDDPPRPVVGKFFKFDTRWQAGRL 34  
DB 69 DVASSTVLPDDVTAVPVGKFFQYDWMKOSTORL 102

RESULT 10



A/Cross-references: UNIPARC:UPI0000175147; GB:U67529; GB:L77117; NID:g1591532; PID:g15922

**C;Genetics:**

A;Map position: FOR771816-773486

A;Start codon: GTG

**C;Keywords:** metalloprotein; methanogenesis; oxidoreductase

F;153/Binding site: coenzyme F430 nickel (Gln) (axial ligand) #status predicted

F;338/Active site: Tyr #status predicted

F:450/Binding site: coenzyme M (Tyr) #status predicted

F:487/Binding site: coenzyme B (Asn) #status predicted

Query Match	27.7%;	Score 51;	DB 2;	Length 556;
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Best Local Similarity 47.6%; Pred. No. 21;

Matches 10; Conservative 3; Mismatches 8; Indels 0; Gaps 0;

QY 11 DDFPRYPVGKFFKFDTWQSA 31

Db 20 EEDPREKYTKFYVFGGWRQSA 40

## RESULT 15

G86231

hypothetical protein [imported] - Arabidopsis thaliana

C;Species: Arabidopsis thaliana (mouse-ear cress)

C:\Date: 02-Mar-2001 #sequence\_02-Mar-2001 #text\_change 27-Oct-2003

C;Accession: G866231

R;Theologis, A.; Ecker, J.R.; Palm, C.J.; Federspiel, N.A.; Kaul, S.; White, O.; Alonso,

Chin, C.W.; Chung, M.K.; Conn, L.; Conway, A.B.; Creasy, T.H.; Dewar, K.;

ansen, N.F.; Hughes, B.; Huizar, L.

Nature 408, 816-820, 2000

A; Authors: Hunter, J.L.; Jenkins, J.; Johnson-Hopson, C.; Khan, S.; Khaykin, E.; Kim, C.

C.A.; Li, J.H.; Li, Y.; Lin, X.; Liu, S.X.; Liu, Z.A.; Lueros, J.S.; Malti, R.; Marziani, P.; Pizzol, M.; Poonen, T.; Powell, D.; Sakano, H.

Rizzo, M.; Rooney, T.; Rowley, D.; Sakano, H.  
A: Authors: Salazar S I.; Schwartz T B.; Shinn P.; Southwick A M.; Sun H.; Tallon

A; Authors: Salzberg, S.L.; Schwartz, J.R.; Shinn, P.; Southwick, A.M.; Sun, H.; Tallon, ker, M.; Wu, D.; Yu, G.; Fraser, C.M.; Venter, J.C.; Davis, P.W.

A:Tit]e: Sequence and analysis of chromosome 1 of the plant Arabidopsis thaliana. Ker, M.; Wu, D.; Yu, G.; Fraser, C.M.; Venter, J.C.; Davis, R.W.

A:Reference number: A86141: MUID:21016719: PMID:11130712  
A;Title: sequence and analysis of chromosome 1 of the plant *Arabidopsis*.

A:Accession: G86231  
A:Reference number: A86141; MUID:21016/19; PMID:11130/12

A;ACCESSION: 060431  
A;STATUS: preliminary

A;Molecule type: DNA

A;Residues: 1-575 <S

A; Cross-references: UNI

C:Genetics:

A;Map posit

C;Superfamily: co

[illegible]

Best Local Similarity 39.4%; Pred. No. 26;

Matches 13; Conservative 4; Mismatches

[illegible]

1 101504WZLNDDNFUEFN011AV1VDDWGE04 33

Search completed: May 21, 2006, 12:46:50  
Job time : 22.6667 secs

Job time : 22.6667 secs

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GenCore version 5.1.8  
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OM protein - protein search, using sw model

Run on: May 21, 2006, 12:31:30 ; Search time 162.333 Seconds

(Without alignments)  
193.740 Million cell updates/sec

Title: US-10-632-366-2

Perfect score: 184  
Sequence: 1 DVSTSQAVLPDDPPRYVGVKFKFDTWROSAGRL 34

Scoring table: BLOSUM62  
Gapop 10.0 , Gapext 0.5

Searched: 2849598 seqs, 925015592 residues

Total number of hits satisfying chosen parameters: 2849598

Minimum DB seq length: 0

Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%  
Maximum Match 100%  
Listing first 45 summaries

Database : UniProt 7.2:\*  
1: uniprot\_sprot:\*  
2: uniprot\_trembl:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	184	100.0	154	2	063265_RAT
2	184	100.0	180	1	IGF2_RAT
3	177	96.2	180	1	IGF2_MOUSE
4	177	96.2	180	2	Q2IDG5_MUSSE
5	177	96.2	191	2	Q2IDG7_MUSSE
6	148	80.4	128	1	IGF2_CAVPO
7	147	79.9	181	1	IGF2_PIG
8	146	79.3	129	1	IGF2_MUSVI
9	142	77.2	180	1	IGF2_HUMAN
10	140	76.1	123	1	Q8MJ15_PIG
11	137	74.5	78	2	Q5W77_RAT
12	138	69.6	179	1	IGF2_SHEEP
13	128	69.6	184	2	Q673F2_DIDMA
14	121	65.8	106	2	Q9WY26_TRIYU
15	120	65.2	104	2	Q862E7_BOVIN
16	120	65.2	113	2	Q9N1S5_CAPCA
17	120	65.2	141	2	Q862G1_BOVIN
18	120	65.2	149	2	Q9MYX4_BOVIN
19	120	65.2	155	1	IGF2_BOVIN
20	114	62.0	115	2	Q5Q0X5_EQUUS
21	114	62.0	181	1	IGF2_HORSE
22	91	49.5	62	2	Q9XS88_HORSE
23	90	48.9	57	2	Q28237_CERIL
24	56.5	30.7	151	2	Q9N171_ORNAN
25	56.5	30.7	239	2	Q673F3_ORNAN
26	55.5	30.2	122	2	Q8WNP3_3MANM
27	55.5	30.2	446	2	Q6CK18_KLULA
28	55.5	30.2	951	2	Q7ZTD6_GGALL
29	55	29.9	624	2	Q4BDX2_BURVI
30	54.5	29.6	485	1	GWT1_CANAL
31	54.5	29.6	485	2	Q59T33_CANAL

32	54.5	29.6	539	2	Q7S413_NEUCR	Q7S413 neurospora
33	54.5	29.6	952	2	Q9NH28_HRLPN	Q9NH28 helicoverpa
34	54	29.3	288	2	Q5W102_BACCK	Q5W102 bacillus cl
35	54	29.3	358	2	Q4QTN8_KLEBN	Q4QTN8 klebsiella
36	54	29.3	930	2	Q45Y14_GVIRU	Q45Y14 burkholderi
37	54	29.3	930	2	Q63Y08_BURPS	Q63Y08 burkholderi
38	54	29.3	1526	2	Q6CYV1_ERWCT	Q6CYV1 erwinia car
39	54	29.3	4331	2	Q4IYL2_AZOVI	Q4IYL2 azotobacter
40	53.5	29.1	125	2	Q2IV82_GDELT	Q2IV82 syntrophus
41	53.5	29.1	458	1	GWT1_YEAST	P47026 saccharomyc
42	53.5	29.1	2380	2	Q7QYF6_GIALA	Q7QYF6 giardia lam
43	53	28.8	153	2	Q4RKC2_TETNG	Q4RKC2 tetradodon n
44	53	28.8	200	2	Q5AXY7_EMENT	Q5AXY7 aspergillus
45	53	28.8	307	2	Q3V9Y8_9SPHN	Q3V9Y8 sphingopyxi

## ALIGNMENTS:

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RESULT 1
ID 063265_RAT PRELIMINARY; PRT; 154 AA.
AC 063265;
DT 01-NOV-1996, integrated into UniProtKB/TREMBL.
DT 01-NOV-1996, sequence version 1.
DT 07-FEB-2006, entry version 29.
DE Rat insulin-like growth factor II (Fragment).
OS Rattus norvegicus (Rat).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
OC Muridae; Murinae; Murinae; Rattus.
OX NCBI_TaxID=10116;
RN 1;
RP NUCLEOTIDE SEQUENCE.
RA Reicher M.M., Brunt C.B., Whitfield H.J., Yang Y.W.-H., Frunzio R.,
RA Graham D.E., Colligan J.E., Terrell J.F., Acquaviva A.M., Nisley S.P.;
RT "Characterization of the biosynthetic precursor for rat insulin-like
RT growth factor II by biosynthetic labeling, radiosequencing, and
RT nucleotide sequence analysis of a cDNA clone."
RL Cancer Cells 3:131-138(1985).
CC -1- SUBCELLULAR LOCATION: Secreted (By similarity).
CC -1- SIMILARITY: Belongs to the insulin family.
CC
CC -----
CC Copyrighted by the UniProt Consortium, see http://www.uniprot.org/terms
CC Distributed under the Creative Commons Attribution-NonDerivs License
CC
CC EMBL; M38688; AAA41433.1; -; mRNA.
DR HSSP; P01344; 1IGL.
DR SMR; 063265; 1-65.
DR GO; GO:0005576; C:extracellular region; IEA.
DR GO; GO:0005179; F:hormone activity; IEA.
DR GO; GO:0007582; P:physiological process; IEA.
DR InterPro; IPR004825; Ins/IGF/relax.
DR InterPro; IPR003234; Insulin-like.
DR Pfam; PF00049; Insulin; 1.
DR PRINTS; PR00277; INSULIN.
DR PRODOM; PD015667; Mollusc; 1.
DR SMART; SM00078; IIGF; 1.
DR PROSITE; PS00262; INSULIN; 1.
FT NON TER 1
SQ
SEQUENCE 154 AA; 17376 MW; 2AD45125EP8B615E CRC64;

Query Match 100.0%; Score 184; DB 2; Length 154;
Best Local Similarity 100.0%; Pred. No. 1.7e-18;
Matches 34; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 DVSTSQAVLPDDPPRYVGVKFKFDTWROSAGRL 34
DB 67 DVSTSQAVLPDDPPRYVGVKFKFDTWROSAGRL 100

RESULT 2
IGF2_RAT

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ID IGF2\_RAT STANDARD; PRT; 180 AA.  
AC P01346;  
DT 21-JUL-1986, integrated into UniProtKB/Swiss-Prot.  
DT 20-MAR-1987, sequence version 1.  
DT 07-FEB-2006, entry version 59.  
DE Insulin-like growth factor II precursor (IGF-II) (Multiplication-  
stimulating polypeptide) (Multiplication-stimulating activity) (MSA).  
OS Name=IGF2; Synonyms=IGF-2;  
GN Rattus norvegicus (Rat).  
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
OC Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;  
OC Muridae; Murinae; Rattus.  
OC NCBI\_TaxID=10116;  
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RC STRAIN=BRL-3A;  
RX MEDLINE=84295593; PubMed=6382022;  
RT Dull T.J., Gray A., Hayflick J.S., Ullrich A.;  
RT "Insulin-like growth factor II precursor gene organization in relation  
to insulin gene family.";  
RL Nature 310:777-781(1984).  
RN (2)  
RP NUCLEOTIDE SEQUENCE.  
RC STRAIN=Buf6153;  
RX MEDLINE=85215534; PubMed=3889836;  
RA Soares M.B., Ishii D.N., Efstratiadis A.;  
RT "Developmental and tissue-specific expression of a family of  
transcripts related to rat insulin-like growth factor II mRNA.";  
RL Nucleic Acids Res. 13:1119-1134(1985).  
RN (3)  
RP NUCLEOTIDE SEQUENCE.  
RX MEDLINE=8722616; PubMed=2438416;  
RA Soares M.B., Turken A., Ishii D.N., Mills L., Episkopou V., Cotter S.,  
RA Zeitlin S., Efstratiadis A.;  
RT "Rat insulin-like growth factor II gene. A single gene with two  
promoters expressing a multitranscript family.";  
RL J. Mol. Biol. 192:737-752(1986).  
RN (4)  
RP NUCLEOTIDE SEQUENCE.  
RX MEDLINE=87057436; PubMed=3023383;  
RA Frunzio R., Chiariotti L., Brown A.L., Graham D.E., Rechler M.M.,  
RA Bruni C.B.;  
RT "Structure and expression of the rat insulin-like growth factor II  
(rIGF-II) gene. rIGF-II RNAs are transcribed from two promoters.";  
RL J. Biol. Chem. 261:17138-17149(1986).  
RN (5)  
RP NUCLEOTIDE SEQUENCE.  
RX MEDLINE=89000793; PubMed=3167060; DOI=10.1016/0167-4781(89)90138-8;  
RA Ueno T., Takahashi K., Matsuguchi T., Endo H., Yamamoto M.;  
RT "Transcriptional deviation of the rat insulin-like growth factor II  
gene initiated at three alternative leader-exons between neonatal  
tissues and ascites hepatomas.";  
RL Biochim. Biophys. Acta 950:411-419(1988).  
RN (6)  
RP NUCLEOTIDE SEQUENCE OF 62-180.  
RX MEDLINE=85061532; PubMed=6390212;  
RA Whitfield H.J., Bruni C.B., Frunzio R., Terrell J.E., Nissley S.P.,  
RA Rechler M.M.;  
RT "Isolation of a cDNA clone encoding rat insulin-like growth factor-II  
precursor.";  
RL Nature 312:277-280(1984).  
RN (7)  
RP NUCLEOTIDE SEQUENCE OF 103-180.  
RX MEDLINE=89127259; PubMed=3221878;  
RA Chiariotti L., Brown A.L., Frunzio R., Clemmons D.R., Rechler M.M.,  
RA Bruni C.B.;  
RT "Structure of the rat insulin-like growth factor II transcriptional  
unit: heterogeneous transcripts are generated from two promoters by  
use of multiple polyadenylation sites and differential ribonucleic  
acid splicing.";  
RL Mol. Endocrinol. 2:1115-1126(1988).  
RN (8)  
RP PROTEIN SEQUENCE OF 25-91.

RX MEDLINE=81215670; PubMed=7016879;  
RA Marguier H., Todaro G.U., Henderson I.E., Orcoslan S.;  
RT "Purification and primary structure of a polypeptide with  
RT multiplication-stimulating activity from rat liver cell cultures.  
RT Homology with human insulin-like growth factor II.";  
RL J. Biol. Chem. 256:6859-6865(1981).  
CC -1- FUNCTION: The insulin-like growth factors possess growth-promoting  
CC activity. In vitro, they are potent mitogens for cultured cells.  
CC IGF-II is influenced by placental lactogen and may play a role in  
CC fetal development.  
CC -1- SUBCELLULAR LOCATION: Secreted protein.  
CC -1- SIMILARITY: Belongs to the insulin family.  
CC -----  
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CC Distributed under the Creative Commons Attribution-NonDerivs license  
CC -----  
DR EMBL; X00911; CAA25428.1; -; mRNA.  
DR EMBL; X00911; CAA25429.1; ALT\_INIT; mRNA.  
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DR EMBL; M13870; AAB95624.1; JOINED; Genomic DNA.  
DR EMBL; M29880; AAA41391.1; -; Genomic DNA.  
DR EMBL; M29879; AAA41391.1; JOINED; Genomic DNA.  
DR EMBL; X02213; CAA26136.1; -; mRNA.  
DR EMBL; X13101; CAA31493.1; -; mRNA.  
DR EMBL; X14833; CAA32942.1; -; mRNA.  
DR EMBL; X14834; CAA32943.1; -; mRNA.  
DR EMBL; M30273; AAA41432.1; -; mRNA.  
DR EMBL; M31221; AAA42046.1; -; Genomic DNA.  
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DR HSSP; P01344; IIGL.  
DR SMR; P01346; 25-91.  
DR Ensemble; ENSRNOG00000020369; Rattus norvegicus.  
DR RGD; 2870; IGF2.  
DR InterPro; IPR004824; Bombyxin.  
DR InterPro; IPR004825; Ins/IGF/relax.  
DR Pfam; PF00049; Insulin; 1.  
DR PRINTS; PR00277; INSULIN.  
DR PRODOM; PD001048; Bombyxin; 1.  
DR SMART; SM00078; IIGF; 1.  
DR PROSITE; PS00262; INSULIN; 1.  
KW Direct protein sequencing; Growth factor; Mitogen; Signal.  
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FT FT E peptide.  
FT PROPEP 92 180 /FTId=PRO\_0000015730.  
FT REGION 25 52 B.  
FT REGION 53 64 C.  
FT REGION 65 85 A.  
FT REGION 86 91 D.  
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FT DISULFID 70 75 By similarity.  
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FT CONFLICT 57 57 S -> G (in Ref. 3).  
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Best local Similarity 100.0%; Pred. No. 2e-18; Mismatches 0;  
Matches 34; Conservative 0; Indels 0; Gaps 0;  
Qy 1 DVSTSQAVLPDDPPRYVGVKFFKFTWRSAGRL 34  
Db 93 DVSTSQAVLPDDPPRYVGVKFFKFTWRSAGRL 126  
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ID IGF2\_MOUSE STANDARD; PRT; 180 AA.  
AC P09535;  
DT 01-JUL-1989, integrated into UniProtKB/Swiss-Prot.

DT 01-JUL-1989, sequence version 1.  
 DT 07-FEB-2006, entry version 57.  
 DE Insulin-like growth factor II precursor (Multiplication-stimulating  
 DE polypeptide) (IGF-II).  
 GN Name=IGF2; Synonyms=Igf-2;  
 OS Mus musculus (Mouse).  
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
 OC Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;  
 OC Muridae; Muridae; Murinae; Mus.  
 NCBI\_TaxId=10090;  
 RN [1]  
 RP NUCLEOTIDE SEQUENCE.  
 RX MEDLINE=8705317; PubMed=3780370;  
 RA Stempien M.M., Fong N.M., Rall L.B., Bell G.I.;  
 RT "Sequence of a placental cDNA encoding the mouse insulin-like growth  
 RT factor II precursor.";  
 RL DNA 5:357-361(1986).  
 RN [2]  
 RP NUCLEOTIDE SEQUENCE.  
 RX MEDLINE=91090843; PubMed=1702294;  
 RA Rotwein P., Hall L.J.;  
 RT "Evolution of insulin-like growth factor II: characterization of the  
 RT mouse IGF-II gene and identification of two pseudo-exons.";  
 RL DNA Cell Biol. 9:725-735(1990).  
 RN [3]  
 RP NUCLEOTIDE SEQUENCE.  
 RX MEDLINE=97181545; PubMed=9039503; DOI=10.1093/dnares/3.5.331;  
 RA Sasak H., Shimozaki K., Zubair M., Aoki N., Hatano N., Moore T.,  
 RA Feil R., Constancia M., Reik W., Rotwein P.;  
 RT "Nucleotide sequence of a 28-kb mouse genomic region comprising the  
 RT imprinted Igf2 gene.";  
 RL DNA Res. 3:331-335(1996).  
 RN [4]  
 RP NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA].  
 RC STRAIN=C57BL/6J; TISSUE=Embryo;  
 RX MEDLINE=2238257; PubMed=12477932; DOI=10.1073/pnas.242603899;  
 RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,  
 RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,  
 RA Altshul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,  
 RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,  
 RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,  
 RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,  
 RA Brownstein M.J., Ueidi T.B., Toobyhyki S., Carninci P., Prange C.J.,  
 RA Raha S.S., Loughellano N.A., Peters G.J., Abramson R.D., Mullany S.J.,  
 RA Bosak S.A., McSwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,  
 RA Richards S.K., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,  
 RA Villalón D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,  
 RA Fahey J., Helton E., Kettman M., Madan A., Rodriguez S., Sanchez A.,  
 RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,  
 RA Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,  
 RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,  
 RA Butlerfield Y.S.N., Krzyzanski M.I., Skalska U., Smallus D.E.,  
 RA Scherch A., Schein J.E., Jones S.J.M., Marra M.A.;  
 RT "Generation and initial analysis of more than 15,000 full-length human  
 RT and mouse cDNA sequences.";  
 RL Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).  
 RN [5]  
 RP NUCLEOTIDE SEQUENCE OF 1-52.  
 RX MEDLINE=89160812; PubMed=2537977;  
 RA Tollefsen S.E., Sadow J.L., Rotwein P.;  
 RT "Coordinate expression of insulin-like growth factor II and its  
 RT receptor during muscle differentiation.";  
 RL Proc. Natl. Acad. Sci. U.S.A. 86:1543-1547(1989).  
 RN [6]  
 RP NUCLEOTIDE SEQUENCE OF 1-52 AND 103-180.  
 RC STRAIN=BALB/C; TISSUE=Spleen;  
 RX MEDLINE=9408965; PubMed=8265819; DOI=10.1016/0167-0115(93)90337-8;  
 RA Holtmeijer P.E., Cleutjens C.B., Veenstra G.J., van der Lee F.M.,  
 RA Koonen-Deemst A.M., Sussenbach J.S.;  
 RT "Differential expression of the human, mouse and rat IGF-II genes.";  
 RL Regul. Pept. 48:77-89(1993).  
 CC -1- FUNCTION: The insulin-like growth factors possess growth-promoting  
 CC activity. In vitro, they are potent mitogens for cultured cells.

CC IGF-II is influenced by placental lactogen and may play a role in  
 CC fetal development.  
 CC -1- SUBCELLULAR LOCATION: Secreted protein.  
 CC -1- DEVELOPMENTAL STAGE: Low levels of expression during myoblast  
 CC proliferation. Levels rise rapidly during myoblast differentiation  
 CC and then decrease.  
 CC -1- SIMILARITY: Belongs to the insulin family.  
 CC -----  
 CC Copyrighted by the UniProt Consortium, see <http://www.uniprot.org/terms>  
 CC Distributed under the Creative Commons Attribution-NonCommercial License  
 CC -----  
 DR EMBL; M14951; AAA37683.1; -; mRNA.  
 DR EMBL; M36332; AAA37926.1; -; Genomic DNA.  
 DR EMBL; M36333; AAA37926.1; JOINED; Genomic DNA.  
 DR EMBL; U71085; AAC3516.1; -; Genomic DNA.  
 DR EMBL; BC053489; AAH53489.1; -; mRNA.  
 DR EMBL; M24633; AAA37923.1; -; Genomic DNA.  
 DR EMBL; X71921; CAA50737.1; -; Genomic DNA.  
 DR EMBL; X71922; CAA50738.1; -; Genomic DNA.  
 DR PIR; A24913; A24913.  
 DR HSSP; P01344; IIGL.  
 DR SMR; P09535; 25-91.  
 DR Ensembl; ENSMUSG0000048583; Mus musculus.  
 DR MGI; MGI:96434; IGF2.  
 DR GO; GO:0005615; C:extracellular space; TAS.  
 DR GO; GO:0005159; F:insulin-like growth factor receptor binding; IPT.  
 DR GO; GO:0005515; F:protein binding; IPT.  
 DR GO; GO:0009887; P:organogenesis; IMP.  
 DR InterPro; IPR004824; Bombyxin.  
 DR InterPro; IPR004825; Ins/IGF/relax.  
 DR Pfam; PF00049; Insulin; 1.  
 DR PRINTS; PR00277; INSULINB.  
 DR ProDom; PD001048; Bombyxin; 1.  
 DR SMART; SM00078; IIGF; 1.  
 DR PROSITE; PS00262; INSULIN; 1.  
 KW Growth factor; Mitogen; Signal.  
 FT STGNL 1 24  
 FT CHAIN 25 91  
 FT PROPEP 92 180  
 FT REGION 25 52 Insulin-like growth factor II.  
 FT REGION 53 64 /FTId=PRO\_0000015720.  
 FT REGION 65 85 E peptide.  
 FT REGION 86 91 /FTId=PRO\_0000015721.  
 FT DISULFID 33 71 B. By similarity.  
 FT DISULFID 45 84 D. By similarity.  
 FT DISULFID 70 75 By similarity.  
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 Best local Similarity 94.1%; Pred. No. 2; 2e-17;  
 Matches 32; Conservative 2; Mismatches 0; Indels 0; Gaps 0;  
 Qy 1 DVSTQAVLPDPDPKRYVPGKFKFPTWROSAGRL 34  
 Db 93 DVSTQAVLPDPDPKRYVPGKFKFPTWROSAGRL 126  
 RESULT 4  
 Q21DG5\_MUSSP PRELIMINARY; PRT; 180 AA.  
 AC Q21DG5;  
 DT 07-MAR-2006, integrated into UniProtKB/TrEMBL.  
 DT 07-MAR-2006, sequence version 1.  
 DE Insulin-like growth factor 2.  
 GN Name=IGF2; ORFNames=XK-CH35\_17P24.2-002;  
 OS Mus spretus (Western wild mouse).  
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
 OC Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;  
 OC Muridae; Muridae; Murinae; Mus.  
 NCBI\_TaxId=10096;

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RN      [1]
RP      NUCLEOTIDE SEQUENCE.
RA      Matthews L.;
RL      Submitted (FEB-2006) to the EMBL/GenBank/DBJ databases.
CC      -----
CC      Copyrighted by the UniProt Consortium, see http://www.uniprot.org/terms
CC      Distributed under the Creative Commons Attribution-NoDerivs License
CC      -----
DR      EMBL; C7027994; CAJ76273.1; -; Genomic DNA.
SQ      SEQUENCE 180 AA; 19889 MW; 5CA4059326EE6DB0 CRC64;

Query Match
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Matches 32; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

QY      1 DVSTSQAVLPDDPFRYPVGKFKFDTWRQSAGRL 34
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RESULT 5
ID      Q2IDG7 MUSSP PRELIMINARY; PRT; 191 AA.
AC      Q2IDG7_
DT      07-MAR-2006, integrated into UniProtKB/TrEMBL.
DT      07-MAR-2006, sequence version 1.
DE      Insulin-like growth factor 1.
GN      Name=IGF2; ORFNames=XX-CH35.17P24.2-001;
OS      Mus spretus (Western white mouse).
OC      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC      Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
OC      Muridae; Muridae; Murinae; Mus.
OX      NCBI_TaxID=10096;
RN      [1]
RP      NUCLEOTIDE SEQUENCE.
RA      Matthews L.;
RL      Submitted (FEB-2006) to the EMBL/GenBank/DBJ databases.
CC      -----
CC      Copyrighted by the UniProt Consortium, see http://www.uniprot.org/terms
CC      Distributed under the Creative Commons Attribution-NoDerivs License
CC      -----
DR      EMBL; C7027994; CAJ76271.1; -; Genomic DNA.
SQ      SEQUENCE 191 AA; 20920 MW; B121712E496A7BEA CRC64;

Query Match
Best local Similarity 96.2%; Score 177; DB 2; Length 191;
Matches 32; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

QY      1 DVSTSQAVLPDDPFRYPVGKFKFDTWRQSAGRL 34
DB      104 DVSTSQAVLPDDPFRYPVGKFKFDTWRQSAGRL 137

RESULT 6
ID      IGF2_CAVPO STANDARD; PRT; 128 AA.
AC      Q08279;
DT      01-FEB-1995, integrated into UniProtKB/Swiss-Prot.
DT      01-FEB-1995, sequence version 1.
DE      07-FEB-2006, entry version 41.
DE      Insulin-like growth factor II precursor (IGF-II) (Somatomedin A)
DE      (Fragment).
GN      Name=IGF2;
OS      Cavia porcellus (Guinea pig).
OC      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC      Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia;
OC      Hystriognathii; Caviidae; Cavia.
OX      NCBI_TaxID=10141;
RN      [1]
RP      NUCLEOTIDE SEQUENCE [MRNA].
RC      STRAIN=Hartley; TISSUE=liver;
RX      MEDLINE=93246007; PubMed=1301379; DOI=10.1016/0303-7207(92)90216-S;

```

```

RA      Levinovitz A., Norstedt G., van den Berg S., Robinson I.C.A.F.,
RA      Ekstroem T.J.;
RT      "Isolation of an insulin-like growth factor II cDNA from guinea pig
RT      liver: expression and developmental regulation.";
RL      Mol. Cell. Endocrinol. 89:105-110(1992).
CC      -1- FUNCTION: The insulin-like growth factors possess growth-promoting
CC      activity. In vitro, they are potent mitogens for cultured cells.
CC      IGF-II is influenced by placental lactogen and may play a role in
CC      fetal development.
CC      -1- SUBCELLULAR LOCATION: Secreted protein.
CC      -1- DEVELOPMENTAL STAGE: Expressed predominantly in fetal tissues and
CC      at lower levels in adult.
CC      -1- SIMILARITY: Belongs to the insulin family.
CC      -----
CC      Copyrighted by the UniProt Consortium, see http://www.uniprot.org/terms
CC      Distributed under the Creative Commons Attribution-NoDerivs License
CC      -----
DR      EMBL; S59899; AAB36479.1; -; mRNA.
DR      PIR; I57671; I57671.
DR      HSSP; P01344; IIGL.
DR      SMR; Q08279; 25-91.
DR      InterPro; IPR004824; Bombyxin.
DR      InterPro; IPR004825; Ins/IGF/relax.
DR      Pfam; PF00049; Insulin; 1.
DR      PRINTS; PR00277; INSULINB.
DR      ProDom; PD001048; Bombyxin; 1.
DR      SMART; SM00078; IIGF; 1.
DR      PROSITE; PS00262; INSULIN; 1.
KW      Growth factor; Mitogen; Signal.
FT      SIGNAL 1 24
FT      CHAIN 25 91
FT      FT 25 91 Insulin-like growth factor II.
FT      PROPEP 92 >128
FT      REGION 25 52
FT      REGION 53 64
FT      REGION 65 85
FT      REGION 86 91
FT      DISULFID 33 71
FT      DISULFID 45 84
FT      DISULFID 70 75
FT      NON TER 128 128
SQ      SEQUENCE 128 AA; 14420 MW; BC65A1D81A4CE056 CRC64;

Query Match
Best local Similarity 80.4%; Score 148; DB 1; Length 128;
Matches 27; Conservative 3; Mismatches 4; Indels 0; Gaps 0;

QY      1 DVSTSQAVLPDDPFRYPVGKFKFDTWRQSAGRL 34
DB      93 DVSTSQAVLPDDPFRYPVGKFKFDTWRQSAGRL 126

RESULT 7
ID      IGF2_PIG STANDARD; PRT; 161 AA.
AC      P23635;
DT      01-NOV-1991, integrated into UniProtKB/Swiss-Prot.
DT      01-FEB-1996, sequence version 2.
DE      07-FEB-2006, entry version 48.
DE      Insulin-like growth factor II precursor (IGF-II).
GN      Name=IGF2;
OS      Sus scrofa (Pig).
OC      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC      Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Suidae;
OC      Sus.
OX      NCBI_TaxID=9823;
RN      [1]
RP      NUCLEOTIDE SEQUENCE.
RX      MEDLINE=91057136; PubMed=2243790;
RT      "Nucleotide sequence of a porcine insulin-like growth factor II
RT      cDNA.";

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RL Nucleic Acids Res. 18:6430-6430(1990).  
RN [2]  
RP NUCLEOTIDE SEQUENCE.  
RC STRAIN=Large white.  
RX MEDLINE=22135958; PubMed=12140686; DOI=10.1007/s00335-001-3059-x;  
RA Anarger V., Nguyen M., Van Laere A.-S., Braunschweig M., Nezer C.,  
RT "Comparative sequence analysis of the INS-IGF-II9 gene cluster in  
RT pigs.";  
RL Mamm. Genome 13:388-398(2002).  
RN [3]  
RP NUCLEOTIDE SEQUENCE.  
RC STRAIN=European wild boar, Hampshire, Japanese wild boar, Landrace,  
RC Large white, Meishan, and Pietrain;  
RX MEDLINE=22935770; PubMed=14574411; DOI=10.1038/nature02064;  
RA Van Laere A.-S., Nguyen M., Braunschweig M., Nezer C., Collette C.,  
RA Moreau L., Archibald A.L., Haley C., Buys N., Tally M., Andersson G.,  
RT "A regulatory mutation in IGF2 causes a major QTL effect on muscle  
RT growth in the pig.";  
RL Nature 425:832-836(2003).  
RN [4]  
RP PROTEIN SEQUENCE OF 25-91.  
RX MEDLINE=90039035; PubMed=2809477;  
RA Francis G.L., Owens P.C., McNeil K.A., Wallace J.C., Ballard F.J.;  
RT "Purification, amino acid sequences and assay cross-reactivities of  
RT porcine insulin-like growth factor-I and -II.";  
RL J. Endocrinol. 122:681-687(1989).  
CC -1- FUNCTION: The insulin-like growth factors possess growth-promoting  
CC activity. In vitro, they are potent mitogens for cultured cells.  
CC IGF-II is influenced by placental lactogen and may play a role in  
CC fetal development.  
CC -1- SUBCELLULAR LOCATION: Secreted protein.  
CC -1- SIMILARITY: Belongs to the insulin family.  
CC Copyrighted under the UniProt Consortium, see <http://www.uniprot.org/terms>  
CC Distributed under the Creative Commons Attribution-NonDerivs License  
CC  
EMBL: X56094; CAA39574.1; -; mRNA.  
DR EMBL: AY044628; AAL69551.1; -; Genomic DNA.  
DR EMBL: AY242098; AAQ00953.1; -; Genomic DNA.  
DR EMBL: AY242099; AAQ00955.1; -; Genomic DNA.  
DR EMBL: AY242100; AAQ00958.1; -; Genomic DNA.  
DR EMBL: AY242101; AAQ00961.1; -; Genomic DNA.  
DR EMBL: AY242102; AAQ00964.1; -; Genomic DNA.  
DR EMBL: AY242103; AAQ00967.1; -; Genomic DNA.  
DR EMBL: AY242104; AAQ00970.1; -; Genomic DNA.  
DR EMBL: AY242105; AAQ00973.1; -; Genomic DNA.  
DR EMBL: AY242106; AAQ00976.1; -; Genomic DNA.  
DR EMBL: AY242107; AAQ00979.1; -; Genomic DNA.  
DR EMBL: AY242108; AAQ00982.1; -; Genomic DNA.  
DR EMBL: AY242109; AAQ00984.1; -; Genomic DNA.  
DR EMBL: AY242110; AAQ00986.1; -; Genomic DNA.  
DR EMBL: AY242111; AAQ00988.1; -; Genomic DNA.  
DR EMBL: AY242112; AAQ00991.1; -; Genomic DNA.  
DR HSSP: P01344; 1IGL.  
DR SMR: P23695; 25-91.  
DR InterPro: IPR004825; Ins/IGF/relax.  
DR InterPro: IPR003234; Insulin-like.  
DR Pfam: PF00049; Insulin; 1.  
DR PRINTS: PR00277; INSULIN.  
DR ProDom: PD015667; Mollusc; 1.  
DR SMART: SM00078; 1IGF; 1.  
DR PROSITE: PS00262; INSULIN; 1.  
DR Direct protein sequencing; Growth factor; Mitogen; Signal.  
FT SIGNAL 1 24 By similarity.  
FT CHAIN 1 24 Insulin-like growth factor II.  
FT PROPEP 92 181 E peptide.  
FT REGION 25 52 B.  
FT REGION 53 64 C.  
FT REGION 65 85 A.

FT REGION 86 91 D.  
FT DISULFID 33 71 By similarity.  
FT DISULFID 45 84 By similarity.  
FT DISULFID 70 75 By similarity.  
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Query Match 79.9%; Score 147; DB 1; Length 181;  
Best local Similarity 76.5%; Pred. No. 5.3e-13;  
Matches 26; Conservative 4; Mismatches 4; Indels 0; Gaps 0;  
QY 1 DVSTQAVLPDPPRPYVGVKFKFEDTWQSGAGRL 34  
Db 93 DVSTPTPLVDNPPRPYVGVKFKFRYDWTQSGAQRLL 126  
ID IGF2 MUSVI STANDARD; PRT; 129 AA.  
AC P41694;  
DT 01-NOV-1995, integrated into UniProtKB/Swiss-Prot.  
DT 01-NOV-1995, sequence version 1.  
DT 07-FEB-2006, entry version 34.  
DE Insulin-like growth factor II precursor (IGF-II) (Fragment).  
GN Name=IGF2;  
OS Mustela vison (American mink).  
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eureleostomi;  
OC Mammalia; Eutheria; Laurasiatheria; Carnivora; Fissipedia; Mustelidae;  
OC Mustelinae; Mustela.  
OX NCBI\_TaxID=9667;  
RN [1]  
RP NUCLEOTIDE SEQUENCE [MRNA].  
RC TISSUE=liver;  
RX MEDLINE=93307613; PubMed=7686523; DOI=10.1006/gen.1993.1079;  
RA Ekstrom T.J., Baecklin B.M., Lindqvist Y., Ekstrom W.;  
RT "Insulin-like growth factor II in the mink (Mustela vison):  
RT determination of a cDNA nucleotide sequence and developmental  
RT regulation of its expression.";  
RL Gen. Comp. Endocrinol. 90:243-250(1993).  
CC -1- FUNCTION: The insulin-like growth factors possess growth-promoting  
CC activity. In vitro, they are potent mitogens for cultured cells.  
CC IGF-II is influenced by placental lactogen and may play a role in  
CC fetal development.  
CC -1- SUBCELLULAR LOCATION: Secreted protein.  
CC -1- SIMILARITY: Belongs to the insulin family.  
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CC  
EMBL: S63459; AAB27392.2; -; mRNA.  
DR HSSP: P01344; 1IGL.  
DR SMR: P41694; 25-92.  
DR InterPro: IPR004825; Ins/IGF/relax.  
DR Pfam: PF00049; Insulin; 1.  
DR PRINTS: PR00277; INSULIN.  
DR SMART: SM00078; 1IGF; 1.  
DR PROSITE: PS00262; INSULIN; 1.  
KW Growth factor; Mitogen; Signal.  
FT SIGNAL 1 24 By similarity.  
FT CHAIN 1 24 Insulin-like growth factor II.  
FT PROPEP 93 >129 E peptide (By similarity).  
FT REGION 25 52 B.  
FT REGION 53 65 C.  
FT REGION 66 86 A.  
FT REGION 87 92 D.  
FT DISULFID 33 72 By similarity.  
FT DISULFID 45 85 By similarity.  
FT DISULFID 71 76 By similarity.  
FT NON\_TER 129 129  
SQ SEQUENCE 129 AA; 14437 MW; FD0661DAFB473D0 CRC64;  
Query Match 79.3%; Score 146; DB 1; Length 129;



"A new 5'-non-coding region for human placental insulin-like growth factor II mRNA expression";  
 RT FEBS Lett. 222:181-185(1987).  
 RN [15]  
 RP NUCLEOTIDE SEQUENCE OF 1-52.  
 RC TISSUE=Liver;  
 RX MEDLINE=86003966; PubMed=3652904;  
 RA Gray A., Tam A.W., Dull T.J., Hayflick J.S., Pintar J., Cavenne W.K., Koutos A., Ulrich A.;  
 RT "tissue-specific and developmentally regulated transcription of the insulin-like growth factor 2 gene";  
 RL DNA 6:283-295(1987).  
 RN [16]  
 RP PROTEIN SEQUENCE OF 25-91.  
 RX MEDLINE=78191259; PubMed=658418; DOI=10.1016/0014-5793(78)80237-3;  
 RA Rinderknecht E., Humbel R.E.;  
 RT "Primary structure of human insulin-like growth factor II";  
 RL FEBS Lett. 89:283-286(1978).  
 RN [17]  
 RP PARTIAL PROTEIN SEQUENCE, AND DISULFIDE BONDS.  
 RX MEDLINE=89255428; PubMed=2722836;  
 RA Smith M.C., Cook J.A., Furman T.C., Occolowicz J.L.;  
 RT "Structure and activity dependence of recombinant human insulin-like growth factor II on disulfide bond pairing";  
 RL J. Biol. Chem. 264:9314-9321(1989).  
 RN [18]  
 RP PROTEIN SEQUENCE OF 25-68.  
 RX MEDLINE=95360205; PubMed=7633596; DOI=10.1016/0378-4347(94)00576-0;  
 RA De Ceuninck F., Willeput J., Corvol M.;  
 RT "Purification and characterization of insulin-like growth factor II (IGF II) and an IGF II variant from human placenta";  
 RL J. Chromatogr. B 666:203-214(1995).  
 RN [19]  
 RP MASS SPECTROMETRY, AND PROCESSING.  
 RX MEDLINE=22474139; PubMed=12586351; DOI=10.1016/S0014-5793(03)00042-5;  
 RA Nedelkov D., Nelson R.W., Kiernan U.A., Niederkofer E.B., Tubbs K.A.;  
 RT "Detection of bound and free IGF-1 and IGF-2 in human plasma via biomolecular interaction analysis mass spectrometry";  
 RL FEBS Lett. 536:130-134(2003).  
 RN [20]  
 RP MASS SPECTROMETRY, AND PROCESSING.  
 RX PubMed=15359740; DOI=10.1021/Pr0499388;  
 RA Nelson R.W., Nedelkov D., Tubbs K.A., Kiernan U.A.;  
 RT "Quantitative mass spectrometric immunoassay of insulin like growth factor I";  
 RL J. Proteome Res. 3:851-855(2004).  
 RN [21]  
 RP CARBOHYDRATE-LINKAGE SITE THR-99.  
 RX MEDLINE=92235026; PubMed=1569071;  
 RA Hudgins W.R., Hampton B., Burgess W.H., Perdue J.F.;  
 RT "The identification of O-glycosylated precursors of insulin-like growth factor II";  
 RL J. Biol. Chem. 267:8153-8160(1992).  
 RN [22]  
 RP 3D-STRUCTURE MODELING.  
 RX MEDLINE=83210259; PubMed=6189745;  
 RA Blundell T.L., Bedarct S., Humbel R.E.;  
 RT "Tertiary structures, receptor binding, and antigenicity of insulinlike growth factors";  
 RL Fed. Proc. 42:2592-2597(1983).  
 RN [23]  
 RP STRUCTURE BY NMR.  
 RX MEDLINE=95080243; PubMed=7527339;  
 RA Terasawa H., Kohda D., Hatanaka H., Nagata K., Higashihashi N.,

Query Match 77.2%; Score 142; DB 1; Length 180;  
 Best Local Similarity 73.5%; Pred. No. 2.9e-12;  
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QY 1 DVSTQAVLPDDFPFRYPVGKFKFDPTWROSA 34  
 DB 93 DVSTPPTVLPDNPFRYPVGKFKFDPTWROSA 126

RESULT 10  
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 ID Q8MU5\_PIG  
 AC Q8MU5;  
 DT 01-OCT-2002, integrated into UniProtKB/TrEMBL.  
 DT 01-OCT-2002, sequence version 1.  
 DT 07-FEB-2006, entry version 15.  
 DE Insulin-like growth factor 2 preproprotein (Fragment).  
 GN Name=IGF2;  
 OS Sus scrofa (Pig).  
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Suidae; Sus.  
 OC NCBI\_TaxID=9823;  
 OX NCBI [1]  
 RP NUCLEOTIDE SEQUENCE.  
 RX MEDLINE=22135958; PubMed=12140686; DOI=10.1007/s00335-001-3059-x;  
 RA Amarger V., Nguyen M., Van Laere A.-S., Braunschweig M., Nezer C., Georges M., Andersson L.;  
 RT "Comparative sequence analysis of the INS-IGF2-H19 gene cluster in pigs";  
 RL Mamm. Genome 13:388-398(2002).  
 CC -1- SUBCELLULAR LOCATION: Secreted (By similarity).  
 CC -1- SIMILARITY: Belongs to the insulin family.  
 CC -----  
 CC Copyrighted by the UniProt Consortium, see <http://www.uniprot.org/terms>  
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 CC -----  
 DR EMBL: AF466299; AAM83400.1; -; mRNA.  
 DR HSSP: P01344; 1IGL.  
 DR SWR; Q8MU5; 25-91.  
 DR GO: GO:0005576; C:extracellular region; IEA.  
 DR GO: GO:0005179; F:hormone activity; IEA.  
 DR GO: GO:0018445; F:prohormone activity; IEA.  
 DR GO: GO:0007582; P:physiological process; IEA.  
 DR InterPro: IPR004824; Bombyxin.  
 DR InterPro: IPR004825; Ins/IGF/relax.  
 DR InterPro: IPR003234; Insulin-like.  
 DR Pfam: PF00049; Insulin; 1.  
 DR PRINTS: PR00276; INSULIN.  
 DR PRINTS: PR00277; INSULIN.  
 DR ProDom: PD001048; Bombyxin; 1.  
 DR ProDom: PD015667; Molluscins; 1.  
 DR SMART: SM00078; IIGF; 1.  
 DR PROSITE: PS00262; INSULIN; 1.  
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 FT SEQUENCE 123 AA; 13876 MW; A0783AF5D9B89338 CRC64;

Query Match 76.1%; Score 140; DB 2; Length 123;  
 Best Local Similarity 77.4%; Pred. No. 3.6e-12;  
 Matches 24; Conservative 4; Mismatches 3; Indels 0; Gaps 0;

QY 1 DVSTQAVLPDDFPFRYPVGKFKFDPTWROSA 31  
 DB 93 DVSTPPTVLPDNPFRYPVGKFKFDPTWROSA 123

RESULT 11  
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 ID O53WT7\_RAT  
 AC O53WT7;  
 DT 24-MAY-2005, integrated into UniProtKB/TrEMBL.  
 DT 24-MAY-2005, sequence version 1.  
 DT 07-FEB-2006, entry version 3.  
 DE Insulin-like growth factor II gene (Fragment).  
 GN Name=IGFII;  
 OS Rattus norvegicus (Rat).  
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.  
 OC NCBI\_TaxID=10116;  
 OX NCBI [1]

RP NUCLEOTIDE SEQUENCE.  
RC STRAIN=Sprague-Dawley;  
RX MEDLINE=90001243; PubMed=2477062; DOI=10.1016/0167-4781(89)90074-2;  
RA Ueno T., Takahashi K., Matsuguchi T., Ikejiri K., Endo H.,  
RY Yamamoto M.;  
RT "Multiple polyadenylation sites in a large 3'-most exon of the rat  
insulin-like growth factor II gene.";  
RL Biochim. Biophys. Acta 1009:27-34(1989).  
CC Copyrighted by the UniProt Consortium, see <http://www.uniprot.org/terms>  
CC Distributed under the Creative Commons Attribution-NonDerivs license  
CC  
DR EMBL: X16703; CAA34674.1; -; mRNA.  
FT NON\_TER 1 1  
SQ SEQUENCE 78 AA; 8983 MW; 7E827486A085C31 CRC64;  
  
Query Match 74.5%; Score 137; DB 2; Length 78;  
Best Local Similarity 100.0%; Pred. No. 5, 9e-12;  
Matches 24; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
  
OY 11 DDFPRYPVGKFKFDTWROSAGRL 34  
Db 1 DDFPRYPVGKFKFDTWROSAGRL 24  
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RESULT 12  
IGF2\_SHEEP STANDARD; PRT; 179 AA.  
ID IGF2\_SHEEP  
AC P10764;  
DT 01-JUL-1989, integrated into UniProtKB/Swiss-Prot.  
DT 01-OCT-1989, sequence version 2.  
DT 07-FEB-2006, entry version 51.  
DE Insulin-like growth factor II precursor (IGF-II).  
GN Name=IGF2;  
OS Ovis aries (Sheep).  
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
OC Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Ruminantia;  
OC Pecora; Bovidae; Caprinae; Ovis.  
OC NCBI\_TaxID=9940;  
OX 11  
RN NUCLEOTIDE SEQUENCE.  
RP TISSUE=Liver;  
RC MEDLINE=89345107; PubMed=2762134;  
RX O'Mahoney J.V., Adams T.E.;  
RT "Nucleotide sequence of an ovine insulin-like growth factor-II cDNA";  
RL Nucleic Acids Res. 17:5392-5392(1989).  
RN 12  
RP NUCLEOTIDE SEQUENCE.  
RC TISSUE=Liver;  
RX MEDLINE=90356421; PubMed=2388846;  
RA Brown W.M., Dziegilewska K.M., Foreman R.C., Saunders N.R.;  
RT "The nucleotide and deduced amino acid sequences of insulin-like  
growth factor II cDNAs from adult bovine and fetal sheep liver.";  
RL Nucleic Acids Res. 18:4614-4614(1990).  
RN 13  
RP NUCLEOTIDE SEQUENCE.  
RC STRAIN=Copworth; TISSUE=Liver;  
RX MEDLINE=93250051; PubMed=8485157; DOI=10.1016/0167-4781(93)90246-A;  
RA Demmer J., Hill D.F., Petersen G.B.;  
RT "Characterization of two sheep insulin-like growth factor II cDNAs  
with different 5'-untranslated regions";  
RL Biochim. Biophys. Acta 1173:79-80(1993).  
RN 14  
RP NUCLEOTIDE SEQUENCE.  
RC TISSUE=Liver;  
RA Olsen S.M., Wong E.A.;  
RL Submitted (SEP-1990) to the EMBL/GenBank/DBJ databases.  
RN 15  
RP PROTEIN SEQUENCE OF 25-91.  
RX MEDLINE=89156887; PubMed=2537174;  
RA Francis G.L., McNeill K.A., Wallace J.C., Ballard F.J., Owens P.C.;  
RT "Sheep insulin-like growth factors I and II: sequences, activities and  
assays.";

RL Endocrinology 124:1173-1183(1989).  
RN [6]  
RP PROTEIN SEQUENCE OF 25-58.  
RX MEDLINE=89323215; PubMed=2752053; DOI=10.1016/0167-4838(89)90131-3;  
RA Hey A.W., Browne C.A., Simpson R.J., Thorburn G.D.;  
RT "Simultaneous isolation of insulin-like growth factors I and II from  
adult sheep serum";  
RL Biochim. Biophys. Acta 997:27-35(1989).  
CC -1- FUNCTION: The insulin-like growth factors possess growth-promoting  
CC activity. In vitro, they are potent mitogens for cultured cells.  
CC IGF-II is influenced by placental lactogen and may play a role in  
CC fetal development.  
CC -1- SUBCELLULAR LOCATION: secreted protein.  
CC -1- SIMILARITY: Belongs to the insulin family.  
CC  
CC Copyrighted by the UniProt Consortium, see <http://www.uniprot.org/terms>  
CC Distributed under the Creative Commons Attribution-NonDerivs license  
CC  
DR EMBL: U00668; AAB60626.1; -; Genomic DNA.  
DR EMBL: U00666; AAB60626.1; JOINED; Genomic DNA.  
DR EMBL: U00667; AAB60626.1; JOINED; Genomic DNA.  
DR EMBL: X15248; CAA3324.1; -; mRNA.  
DR EMBL: X53554; CAA37621.1; -; mRNA.  
DR EMBL: M89788; AAA31548.1; -; mRNA.  
DR EMBL: M89789; AAA31549.1; -; mRNA.  
DR EMBL: X55638; CAA39163.1; -; mRNA.  
DR PIR: S04858; S04858.  
DR HSSP: P01344; 11GL.  
DR SMR: P10764; 25-91.  
DR InterPro: IPR004825; Ins/IGF/relax.  
DR Pfam: PF00049; Insulin; 1.  
DR PRINTS: PRO0277; INSULIN.  
DR SMART: SM00078; IIGF; 1.  
DR PROSITE: PS00262; INSULIN; 1.  
KW Direct protein sequencing; Growth factor; Mitogen; Signal.  
FT SIGNAL 1 24  
FT CHAIN 25 91 Insulin-like growth factor II.  
FT PROPEP 92 179 E peptide.  
FT REGION 25 52 /FTID=PRO\_0000015732.  
FT REGION 53 64 B.  
FT REGION 65 85 C.  
FT REGION 86 91 A.  
FT DISULFID 33 71 D.  
FT DISULFID 45 84 By similarity.  
FT DISULFID 70 75 By similarity.  
FT CONFLICT 46 47 GD -> DG (in Ref. 5).  
SQ SEQUENCE 179 AA; 19616 MW; 7B369A57F2E4378 CRC64;  
  
Query Match 69.6%; Score 128; DB 1; Length 179;  
Best Local Similarity 70.6%; Pred. No. 3, 2e-10;  
Matches 24; Conservative 2; Mismatches 8; Indels 0; Gaps 0;  
  
OY 1 DVSTQAVLPDDPRYPVGKFKFDTWROSAGRL 34  
Db 93 DVSTQAVLPDDPRYPVGKFKFDTWROSAGRL 126  
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RESULT 13  
O673F2\_DIDMA PRELIMINARY; PRT; 184 AA.  
ID O673F2\_DIDMA  
AC O673F2;  
DT 11-OCT-2004, integrated into UniProtKB/TrEMBL.  
DT 11-OCT-2004, sequence version 1.  
DT 07-FEB-2006, entry version 9.  
DE Insulin-like growth factor 2.  
GN Name=IGF2;  
OS Didelphis marsupialis virginiana (North American opossum).  
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
OC Mammalia; Metatheria; Didelphimorphia; Didelphidae; Didelphis.  
OX NCBI\_TaxID=9267;  
RN [1]

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RP NUCLEOTIDE SEQUENCE.
RX PubMed=15342558; DOI=10.1101/gr.2774804;
RA Weisman J.R., Murphy S.K., Nolan C.M., Dietrich F.S., Jittle R.L.;
RT "Phylogenetic Footprint Analyses of IGF2 in Extant Mammals.";
RL Genome Res. 14:1726-1732(2004).
CC -1- SUBCELLULAR LOCATION: Secreted (by similarity).
CC -1- SIMILARITY: Belongs to the insulin family.
CC -----
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CC Distributed under the Creative Commons Attribution-NoDerivs License
CC -----
DR EMBL, AY552325; AAT45413.1; -; Genomic_DNA.
DR SMR, O673F2; 25-95.
DR GO, GO:0005576; C:extracellular region; IEA.
DR GO, GO:0005179; F:hormone activity; IEA.
DR GO, GO:0007582; P:physiological process; IEA.
DR InterPro, IPR004825; Ins/IGF/relax.
DR InterPro, IPR003334; Insulin-like.
DR Pfam, PF00049; Insulin; 1.
DR PRINTS, PR00277; INSULINB.
DR ProDom, PD015667; Molusc_ins; 1.
DR SMART, SM00078; IIGF; 1.
DR PROSITE, PS00262; INSULIN; 1.
SQ SEQUENCE 184 AA; 20883 MW; 01E50CDB3420129 CRC64;

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Best Local Similarity 64.7%; Pred. No. 3.3e-10;
Matches 22; Conservative 7; Mismatches 5; Indels 0; Gaps 0;

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Db 97 DLSASMWVLPENFPFVGKFKDITQKSAHRL 130
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RESULT 14
O9MYZ6 TRIVU
ID O9MYZ6 TRIVU PRELIMINARY; PRT; 106 AA.
AC O9MYZ6;
DT 01-OCT-2000, integrated into UniProtKB/TrEMBL.
DT 01-OCT-2000, sequence version 1.
DT 07-FEB-2006, entry version 19.
DE Insulin-like growth factor 2 (Fragment).
OS Trichosurus vulpecula (Brush-tailed possum).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Metatheria; Diprotodontia; Phalangeridae; Trichosurus.
OC NCBI_TaxID=9337;
OX [1]
RN NUCLEOTIDE SEQUENCE.
RP MEDLINE=21100219; PubMed=1161776; DOI=10.1006/gcen.2000.7561;
RX Saunders M.C., Gemmell R.T., Curlewis J.D.;
RT "Insulin-like growth factor 2 cDNA cloning and ontogeny of gene
RT expression in the liver of the marsupial brushtail possum (Trichosurus
RT vulpecula).";
RL Gen. Comp. Endocrinol. 121:114-124(2001).
CC -1- SUBCELLULAR LOCATION: Secreted (by similarity).
CC -1- SIMILARITY: Belongs to the insulin family.
CC -----
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CC -----
DR EMBL, AF276074; AAF76900.1; -; mRNA.
DR HSSP, P01344; 11GL.
DR SMR, O9MYZ6; 3-73.
DR GO, GO:0005576; C:extracellular region; IEA.
DR GO, GO:0005179; F:hormone activity; IEA.
DR GO, GO:0007582; P:physiological process; IEA.
DR InterPro, IPR004825; Ins/IGF/relax.
DR InterPro, IPR003334; Insulin-like.
DR Pfam, PF00049; Insulin; 1.
DR PRINTS, PR00276; INSULINA.
DR PRINTS, PR00277; INSULINB.
DR ProDom, PD015667; Molusc_ins; 1.
DR SMART, SM00078; IIGF; 1.

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DR PROSITE: PS00262; INSULIN; 1.
FT NON_TER 1
FT NON_TER 106
SQ SEQUENCE 106 AA; 12021 MW; 804EB2A66FCB7D6D CRC64;

Query Match 65.8%; Score 121; DB 2; Length 106;
Best Local Similarity 64.5%; Pred. No. 1.9e-09;
Matches 20; Conservative 7; Mismatches 4; Indels 0; Gaps 0;

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DB 75 DLSASMMVLPEMFPRFPRFVGKFFRDLTWQKSA 105
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AC Q862E7;
DT 01-JUN-2003, integrated into UniProtKB/TrEMBL.
DT 01-JUN-2003, sequence version 1.
DT 07-FEB-2006, entry version 16.
DE Similar to insulin-like growth factor II (fragment).
OS Bos taurus (Bovine).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Ruminantia;
OC Pecora; Bovidae; Bovinae; Bos.
OX NCBI_TaxID=9913;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RA MEDLINE=22544902; PubMed=12658628; DOI=10.1002/mrc.10292;
RA Ishiwa H., Katsuma S., Kizaki K., Patel O.V., Nakano H.,
RA Takahashi T., Imai K., Hirasawa A., Shiojima S., Ikawa H., Suzuki Y.,
RA Tsujimoto G., Izaike Y., Todotoki J., Hashizume K.;
RT "Characterization of gene expression profiles in early bovine
RL pregnancy using a custom cDNA microarray.";
RL Mol. Reprod. Dev. 65:9-18(2003).
CC -!- SUBCELLULAR LOCATION: Secreted (By similarity).
CC -!- SIMILARITY: Belongs to the insulin family.
CC -----
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CC Distributed under the Creative Commons Attribution-NonDerivs License
CC -----
DR EMBL: AB099052; BAC56542.1; -; mRNA.
DR HSBP: P01344; 11GL.
DR GO: GO:0005576; C:extracellular region; IEA.
DR GO: GO:0005179; F:hormone activity; IEA.
DR GO: GO:0007582; P:physiological process; IEA.
DR InterPro: IPR004825; Ins/IGF/relax.
DR Pfam: PF00049; Insulin; 1.
DR PROSITE: PS00262; INSULIN; 1.
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Best Local Similarity 64.7%; Pred. No. 2.5e-09;
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DB 27 DVSTAVTVLPDDVTAYPVGKFFPGYDIKQSTQRL 60
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Search completed: May 21, 2006, 12:45:45
Job time : 164.333 secs

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OM protein - protein search, using sw model

Run on: May 21, 2006, 12:46:05 ; Search time 31 Seconds  
(without alignments)  
96.001 Million cell updates/sec

Title:	US-10-632-366-2
Perfect score:	184
Sequence:	1 DVSTSQAVLPDDEPPRYPVGKFFKFDITWRQSGRL 34

scoring table: BLOSUM62  
Gapop 10.0 , Gapext 0.5

Searched: 650591 seqs, 87530628 residues

Total number of hits satisfying chosen parameters: 650591

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Minimum DB seq length: 0
Maximum DB seq length: 2000000000
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Post-processing:	Minimum Match	0%
	Maximum Match	100%
	Listing first	45 summaries

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed and is derived by analysis of the total score distribution.

## SUMMARIES

Result No.	Score	Query Match	Length	DB	ID	Description
1	142	77.2	35	2	US-09-623-548A-381	Sequence 381, Appl
2	142	77.2	35	2	US-09-657-276-381	Sequence 381, Appl
3	142	77.2	155	2	US-08-950-720A-10	Sequence 10, Appl
4	142	77.2	156	2	US-09-428-326A-7	Sequence 7, Appl
5	142	77.2	156	2	US-09-972-809-7	Sequence 7, Appl
6	142	77.2	156	2	US-09-972-809-7	Sequence 7, Appl
7	142	77.2	180	1	US-07-953-330A-12	Sequence 12, Appl
8	142	77.2	180	1	US-09-617-389B-19	Sequence 19, Appl
9	142	77.2	180	7	540542-4	Patent No. 540594
10	64	34.8	16	2	US-09-623-548A-380	Sequence 380, Appl
11	64	34.8	16	2	US-10-360-101-185	Sequence 185, Appl
12	64	34.8	16	2	US-09-657-276-380	Sequence 380, Appl
13	54.5	29.6	488	2	US-09-248-796A-15101	Sequence 15101, Appl
14	54	29.3	372	2	US-09-489-039A-10774	Sequence 10774, Appl
15	54	29.3	421	2	US-09-489-039A-7512	Sequence 7512, Appl
16	54	28.3	403	2	US-10-104-047-8454	Sequence 2454, Appl
17	50	27.9	717	2	US-09-136-663A-14	Sequence 1465, Appl
18	49.5	26.7	256	2	US-09-336-663A-14	Sequence 14, Appl
19	49	26.6	264	2	US-09-489-039A-9738	Sequence 9738, Appl
20	48.5	26.4	472	2	US-09-667-365-1901	Sequence 1901, Appl
21	48.5	26.4	473	1	US-08-073-383-6	Sequence 6, Appl
22	48.5	26.4	473	2	US-09-460-441-17	Sequence 17, Appl
23	48.5	26.4	473	5	PCT-US94-06365-6	Sequence 6, Appl
24	48	26.1	375	1	US-08-464-523B-24	Sequence 24, Appl
25	48	26.1	423	1	US-08-464-523B-25	Sequence 25, Appl
26	47.5	25.8	214	1	US-07-953-230A-11	Sequence 11, Appl

45	45.5	24.7	362	2	US-10-142-540-4	Sequence 4, April
44	45.5	24.7	362	2	US-10-142-540-2	Sequence 2, April
43	45.5	24.7	362	2	US-10-142-540-2	Sequence 2, April
42	45.5	24.7	362	2	US-09-949-016-7460	Sequence 7460, April
41	45.5	24.7	362	2	US-09-949-016-7459	Sequence 7459, April
40	45.5	24.7	362	2	US-09-949-016-7458	Sequence 7458, April
39	45.5	24.7	362	2	US-09-949-016-7457	Sequence 7457, April
38	45.5	24.7	362	2	US-09-949-016-7455	Sequence 7455, April
37	45.5	24.7	362	2	US-09-303-592-4	Sequence 4, April
36	45.5	24.7	362	2	US-09-303-592-2	Sequence 2, April
35	45.5	24.7	362	1	US-08-866-458-6	Sequence 6, April
34	45.5	24.7	362	1	US-08-440-845D-6	Sequence 6, April
33	45.5	24.7	362	1	US-08-464-523B-32	Sequence 32, April
32	45.5	24.7	362	1	US-08-948-176-35	Sequence 25, April
31	45.5	24.7	213	2	US-09-252-991A-21832	Sequence 21832, April
30	46	25.0	1132	2	US-09-248-756A-15026	Sequence 15026, April
29	47	25.5	3898	2	US-08-750-717-2	Sequence 2, April
28	47	25.5	1043	2	US-09-252-991A-31111	Sequence 31111, April
27	47	25.5	94	2	US-09-252-991A-24602	Sequence 24602, April

## ALIGNMENTS

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RESULT 1
US-09-623-548A-381
; Sequence 381, Application US/09623548A
; Patent No. 6849714
; GENERAL INFORMATION:
; APPLICANT: Conjugchem, Inc.
; APPLICANT: Bridon, Dominique
; APPLICANT: Ezrin, Alan
; APPLICANT: Milner, Peter
; APPLICANT: Holmes, Darren
; APPLICANT: Thibautreau, Karen
; TITLE OF INVENTION: PROTECTION OF ENDOGENOUS THERAPEUTIC PEPTIDES FROM
; TITLE OF INVENTION: PEPTIDASE ACTIVITY THROUGH COMUGACATION TO BLOOD
; TITLE OF INVENTION: COMPONENTS
; FILE REFERENCE: 2110
; CURRENT APPLICATION NUMBER: US/09/623,548A
; CURRENT FILING DATE: 2000-09-05
; PRIOR APPLICATION NUMBER: 60/134,406
; PRIOR FILING DATE: 1999-05-17
; PRIOR APPLICATION NUMBER: 60/153,406
; PRIOR FILING DATE: 1999-09-10
; PRIOR APPLICATION NUMBER: 60/159,783
; PRIOR FILING DATE: 1999-10-18
; NUMBER OF SEQ ID NOS: 1617
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 381
; LENGTH: 35
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
; OTHER INFORMATION: Peptide
US-09-623-548A-381

Query Match      77.2%; Score 142; DB 2; Length 35;
Best Local Similarity 73.5%; Pred. No. 3e-14;
Matches 25; Conservative 4; Mismatches 5; Indels 0; Gaps 0;

QY      1 DVSTQAVLPDDPFRYPVGKFKEDTWQSAARL 34
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Db      2 DVSTPPTVLPDNPFRYPVGKFKFYDWTWKSQRRL 35

RESULT 2
US-09-657-276-381
; Sequence 381, Application US/09657276
; Patent No. 6887470
; GENERAL INFORMATION:
; APPLICANT: Conjugchem, Inc.

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; APPLICANT: Bridon, Dominique
; APPLICANT: Ezrin, Alan
; APPLICANT: Milner, Peter
; APPLICANT: Holmes, Darren
; APPLICANT: Thibaut, Karen
; TITLE OF INVENTION: PROTECTION OF ENDOGENOUS THERAPEUTIC PEPTIDES FROM
; TITLE OF INVENTION: PEPTIDASE ACTIVITY THROUGH CONJUGATION TO BLOOD
; FILE REFERENCE: 2110
; CURRENT APPLICATION NUMBER: US/09/657,276
; CURRENT FILING DATE: 2000-09-07
; PRIOR APPLICATION NUMBER: 60/134,406
; PRIOR FILING DATE: 1999-05-17
; PRIOR APPLICATION NUMBER: 60/153,406
; PRIOR FILING DATE: 1999-09-10
; PRIOR APPLICATION NUMBER: 60/159,783
; PRIOR FILING DATE: 1999-10-18
; NUMBER OF SEQ ID NOS: 1617
; SOFTWARE: Patent In Ver. 2.1
; SEQ ID NO 381
; LENGTH: 35
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
; US-09-657-276-381

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Best Local Similarity 73.5%; Pred. No. 3e-14;
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RESULT 3
US-08-950-720A-10
; Sequence 10, Application US/08950720A
; Patent No. 6046028
; GENERAL INFORMATION:
; APPLICANT: Conklin, Darrell C.
; APPLICANT: Lofton-Day, Catherine E.
; APPLICANT: Lok, Si
; APPLICANT: Jaspers, Stephen R.
; TITLE OF INVENTION: INSULIN HOMOLOG
; NUMBER OF SEQUENCES: 17
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Zymogenetics, Inc.
; STREET: 1201 Eastlake Avenue East
; CITY: Seattle
; STATE: WA
; COUNTRY: USA
; ZIP: 98102
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Diskette
; OPERATING SYSTEM: DOS
; SOFTWARE: FastSeq for Windows Version 2.0
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/950,720A
; FILING DATE:
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER:
; FILING DATE:
; ATTORNEY/AGENT INFORMATION:
; NAME: Sawislak, Deborah A
; REGISTRATION NUMBER: 37,438
; REFERENCE/DOCKET NUMBER: 96-09
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 206-442-6672
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; TELEFAX: 206-442-6678
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; INFORMATION FOR SEQ ID NO: 10:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 155 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: NO. 6046028e
; US-08-950-720A-10

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Best Local Similarity 73.5%; Pred. No. 1.6e-13;
Matches 25; Conservative 4; Mismatches 5; Indels 0; Gaps 0;

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RESULT 4
US-09-428-226A-7
; Sequence 7, Application US/09428226A
; Patent No. 6548482
; GENERAL INFORMATION:
; APPLICANT: Sundeep, Khosla
; APPLICANT: Conover, Cheryl A.
; TITLE OF INVENTION: TREATMENT OF OSTEOPOROSIS
; FILE REFERENCE: 07039/183001
; CURRENT APPLICATION NUMBER: US/09/428,226A
; CURRENT FILING DATE: 1999-10-27
; PRIOR APPLICATION NUMBER: 09/073,032
; PRIOR FILING DATE: 1998-05-05
; PRIOR APPLICATION NUMBER: 60/045,607
; PRIOR FILING DATE: 1997-05-05
; NUMBER OF SEQ ID NOS: 7
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 7
; LENGTH: 156
; TYPE: PRT
; ORGANISM: Homo sapiens
; US-09-428-226A-7

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Best Local Similarity 73.5%; Pred. No. 1.6e-13;
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Db      69 DVSTPPTVLPDNPFRYPVGKFFQYDTWKSTQRL 102

RESULT 5
US-09-972-809-7
; Sequence 7, Application US/09972809
; Patent No. 663084
; GENERAL INFORMATION:
; APPLICANT: Sundeep, Khosla
; APPLICANT: Conover, Cheryl A.
; TITLE OF INVENTION: TREATMENT OF OSTEOPOROSIS
; FILE REFERENCE: 07039/183001
; CURRENT APPLICATION NUMBER: US/09/972,809
; CURRENT FILING DATE: 2001-10-05
; PRIOR APPLICATION NUMBER: 09/428,226
; PRIOR FILING DATE: 1999-10-27
; PRIOR APPLICATION NUMBER: 60/045,607
; PRIOR FILING DATE: 1997-05-05
; NUMBER OF SEQ ID NOS: 7
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 7
; LENGTH: 156
; TYPE: PRT
; ORGANISM: Homo sapiens
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US-09-972-809-7

Query Match 77.2%; Score 142; DB 2; Length 156;  
Best Local Similarity 73.5%; Pred. No. 1.6e-13;  
Matches 25; Conservative 4; Mismatches 5; Indels 0; Gaps 0;

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DB 69 DVSTPPTVLPDNPFRYPVGKFKFDTWKQSTQRL 102

RESULT 6

US-09-972-809-7  
; Sequence 7, Application US/09972809  
; Patent No. 6916790  
; GENERAL INFORMATION:  
; APPLICANT: Sundee, Khosla  
; APPLICANT: Conover, Cheryl A.  
; TITLE OF INVENTION: TREATMENT OF OSTEOPOROSIS  
; FILE REFERENCE: 07039/183001  
; CURRENT APPLICATION NUMBER: US/09/972,809  
; CURRENT FILING DATE: 2001-10-05  
; PRIOR FILING DATE: 09/428,226  
; PRIOR FILING DATE: 1999-10-27  
; PRIOR APPLICATION NUMBER: 60/045,607  
; PRIOR FILING DATE: 1997-05-05  
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; SEQ ID NO 7  
; LENGTH: 156  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-09-972-809-7

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QY 1 DVSTQAVLPDDFPFYPVGKFKFDTWKQSGARL 34  
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RESULT 7

US-07-953-230A-12  
; Sequence 12, Application US/07953230A  
; Patent No. 5476779  
; GENERAL INFORMATION:  
; APPLICANT: CHEN, Thomas T  
; APPLICANT: SHAMLOTT, Michael J  
; TITLE OF INVENTION: INSULIN-LIKE GROWTH FACTORS ISOLATED  
; TITLE OF INVENTION: FROM RAINBOW TROUT  
; NUMBER OF SEQUENCES: 12  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: Burns, Doane, Swecker & Mathis  
; STREET: George Mason Bldg., Washington & Prince Sts.  
; CITY: Alexandria  
; STATE: Virginia  
; COUNTRY: United States  
; ZIP: 22313-1404  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: PatentIn Release #1.0, Version #1.25  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/07/953,230A  
; FILING DATE: 30-SEP-1992  
; CLASSIFICATION: 435  
; ATTORNEY/AGENT INFORMATION:  
; NAME: Crane-Feury, Sharon E  
; REGISTRATION NUMBER: 36,113  
; REFERENCE/DOCKET NUMBER: 028755-010

TELECOMMUNICATION INFORMATION:

TELEPHONE: (703) 836-6620  
TELEFAX: (703) 836-2021  
INFORMATION FOR SEQ ID NO: 12:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 180 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein

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LOCATION: 57  
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LOCATION: 119  
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Matches 25; Conservative 4; Mismatches 5; Indels 0; Gaps 0;

QY 1 DVSTQAVLPDDFPFYPVGKFKFDTWKQSGARL 34  
DB 93 DVSTPPTVLPDNPFRYPVGKFKFDTWKQSTQRL 126

RESULT 8

US-09-617-389B-19  
; Sequence 19, Application US/09617389B  
; Patent No. 6709659  
; GENERAL INFORMATION:  
; APPLICANT: Lok, Si  
; APPLICANT: Conklin, Darrell C.  
; APPLICANT: Lofton-Day, Catherine E.  
; TITLE OF INVENTION: Antibodies That Bind Testis-Specific  
; TITLE OF INVENTION: Insulin Homolog Polypeptides  
; FILE REFERENCE: 96-06C3  
; CURRENT APPLICATION NUMBER: US/09/617,389B  
; CURRENT FILING DATE: 2000-07-17  
; PRIOR APPLICATION NUMBER: 09/339,148  
; PRIOR FILING DATE: 1999-06-24  
; PRIOR APPLICATION NUMBER: 08/905,267  
; PRIOR FILING DATE: 1997-01-18  
; PRIOR APPLICATION NUMBER: 60/023,213  
; PRIOR FILING DATE: 1996-02-08  
; PRIOR APPLICATION NUMBER: 60/031,592  
; PRIOR FILING DATE: 1996-11-21  
; NUMBER OF SEQ ID NOS: 24  
; SOFTWARE: FastSeq for Windows Version 3.0  
; SEQ ID NO 19

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; LENGTH: 180
; TYPE: PRT
; ORGANISM: Human
US-09-617-389B-19

Query Match          77.2%; Score 142; DB 2; Length 180;
Best Local Similarity 73.5%; Pred. No. 1.8e-13;
Matches 25; Conservative 4; Mismatches 5; Indels 0; Gaps 0;

QY 1 DVSTQAVLPDDPPRYVGKFKFKDTWRQSAGRL 34
DB 93 DVSTPPTVLPDNFPRYPVGKFKFYDTWKOSTORL 126

RESULT 9
5405942-4
; Patent No. 5405942
; APPLICANT: BELL, GRAEME I., RALL, LESLIE B., MERRYWEATHER,
; JAMES P.
; TITLE OF INVENTION: PREPRO INSULIN-LIKE GROWTH FACTORS
; 1 AND 11
; NUMBER OF SEQUENCES: 16
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/65,673
; FILING DATE: 16-JUN-1987
; PRIOR APPLICATION NUMBER: 630,557
; FILING DATE: 19-JUL-1984
; SEQ ID NO:4
; LENGTH: 180
5405942-4

Query Match          77.2%; Score 142; DB 7; Length 180;
Best Local Similarity 73.5%; Pred. No. 1.8e-13;
Matches 25; Conservative 4; Mismatches 5; Indels 0; Gaps 0;

QY 1 DVSTQAVLPDDPPRYVGKFKFKDTWRQSAGRL 34
DB 93 DVSTPPTVLPDNFPRYPVGKFKFYDTWKOSTORL 126

RESULT 10
US-09-623-548A-380
; Sequence 380, Application US/09623548A
; Patent No. 6849714
; GENERAL INFORMATION:
; APPLICANT: Conjuchem, Inc.
; APPLICANT: Bridon, Dominique
; APPLICANT: Ezrin, Alan
; APPLICANT: Milner, Peter
; APPLICANT: Holmes, Darren
; APPLICANT: Thibaudau, Karen
; TITLE OF INVENTION: PROTECTION OF ENDOGENOUS THERAPEUTIC PEPTIDES FROM
; TITLE OF INVENTION: PEPTIDASE ACTIVITY THROUGH CONJUGATION TO BLOOD
; TITLE OF INVENTION: COMPONENTS
; FILE REFERENCE: 2110
; CURRENT APPLICATION NUMBER: US/09/623,548A
; CURRENT FILING DATE: 2000-09-05
; PRIOR APPLICATION NUMBER: 60/134,406
; PRIOR FILING DATE: 1999-05-17
; PRIOR APPLICATION NUMBER: 60/153,406
; PRIOR FILING DATE: 1999-09-10
; PRIOR APPLICATION NUMBER: 60/159,783
; PRIOR FILING DATE: 1999-10-18
; NUMBER OF SEQ ID NOS: 1617
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 380
; LENGTH: 16
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
; OTHER INFORMATION: Peptide
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US-09-623-548A-380

Query Match          34.8%; Score 64; DB 2; Length 16;
Best Local Similarity 75.0%; Pred. No. 0.0063;
Matches 12; Conservative 1; Mismatches 3; Indels 0; Gaps 0;

QY 1 DVSTQAVLPDDPPRY 16
DB 1 DVSTPPTVLPDNFPRY 16

RESULT 11
US-10-360-101-185
; Sequence 185, Application US/10360101
; Patent No. 6861236
; GENERAL INFORMATION:
; APPLICANT: Mol1, Gert N.
; APPLICANT: Leenhouts, Cornelis J.
; TITLE OF INVENTION: Export and modification of (poly)peptide in the lantibiotic way
; FILE REFERENCE: 2183-5673
; CURRENT APPLICATION NUMBER: US/10/360,101
; CURRENT FILING DATE: 2003-02-07
; PRIOR APPLICATION NUMBER: EP 02077060.8
; PRIOR FILING DATE: 2002-05-24
; NUMBER OF SEQ ID NOS: 309
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 185
; LENGTH: 16
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: (C7)-sequence of IGF II 69-84
US-10-360-101-185

Query Match          34.8%; Score 64; DB 2; Length 16;
Best Local Similarity 75.0%; Pred. No. 0.0063;
Matches 12; Conservative 1; Mismatches 3; Indels 0; Gaps 0;

QY 1 DVSTQAVLPDDPPRY 16
DB 1 DVSTPPTVLPDNFPRY 16
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RESULT 12
US-09-657-276-380
; Sequence 380, Application US/09657276
; Patent No. 6867470
; GENERAL INFORMATION:
; APPLICANT: Conjuchem, Inc.
; APPLICANT: Bridon, Dominique
; APPLICANT: Ezrin, Alan
; APPLICANT: Milner, Peter
; APPLICANT: Holmes, Darren
; APPLICANT: Thibaudau, Karen
; TITLE OF INVENTION: PROTECTION OF ENDOGENOUS THERAPEUTIC PEPTIDES FROM
; TITLE OF INVENTION: PEPTIDASE ACTIVITY THROUGH CONJUGATION TO BLOOD
; TITLE OF INVENTION: COMPONENTS
; FILE REFERENCE: 2110
; CURRENT APPLICATION NUMBER: US/09/657,276
; CURRENT FILING DATE: 2000-09-07
; PRIOR APPLICATION NUMBER: 60/134,406
; PRIOR FILING DATE: 1999-05-17
; PRIOR APPLICATION NUMBER: 60/153,406
; PRIOR FILING DATE: 1999-09-10
; PRIOR APPLICATION NUMBER: 60/159,783
; PRIOR FILING DATE: 1999-10-18
; NUMBER OF SEQ ID NOS: 1617
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 380
; LENGTH: 16
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
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; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
; OTHER INFORMATION: Peptide
US-09-657-276-380

Query Match      34.8%; Score 64; DB 2; Length 16;
Best Local Similarity 75.0%; Pred. No. 0.0063;
Matches 12; Conservative 1; Mismatches 3; Indels 0; Gaps 0;

QY      1 DVSTQAVLPDDPPRY 16
      ||| ||| ||| ||| |||
DB      1 DVSTPPTVLPDNPFRY 16

RESULT 13
US-09-248-796A-15101
; Sequence 15101, Application US/09248796A
; Patent No. 6747137
; GENERAL INFORMATION:
; APPLICANT: Keith Weinstein et al
; TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO CANDIDA ALBICAN
; FILE REFERENCE: 107196.132
; CURRENT FILING DATE: 1999-02-12
; PRIOR FILING DATE: 1998-02-13
; PRIOR APPLICATION NUMBER: US 60/074,725
; PRIOR FILING DATE: 1998-08-13
; NUMBER OF SEQ ID NOS: 28208
; SEQ ID NO 15101
; LENGTH: 488
; TYPE: PRT
; ORGANISM: Candida albicans
US-09-248-796A-15101

Query Match      29.6%; Score 54.5; DB 2; Length 488;
Best Local Similarity 41.4%; Pred. No. 7.3;
Matches 12; Conservative 6; Mismatches 10; Indels 1; Gaps 1;

QY      2 VSTQAVLPDDPPRYPVGKFKFDTRQS 30
      : : : : : : : : : : : : : :
DB      132 IITNLAIADVPEIFP-RRFAKVEIWGTS 159

RESULT 14
US-09-489-039A-10774
; Sequence 10774, Application US/09489039A
; Patent No. 6610836
; GENERAL INFORMATION:
; APPLICANT: Gary Breton et al
; TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO KLEBSIELLA
; FILE REFERENCE: 2709.2004001
; CURRENT FILING DATE: US/09/489,039A
; CURRENT FILING DATE: 2000-01-27
; PRIOR APPLICATION NUMBER: US 60/117,747
; PRIOR FILING DATE: 1999-01-29
; NUMBER OF SEQ ID NOS: 14342
; SEQ ID NO 10774
; LENGTH: 372
; TYPE: PRT
; ORGANISM: Klebsiella pneumoniae
US-09-489-039A-10774

Query Match      29.3%; Score 54; DB 2; Length 372;
Best Local Similarity 35.3%; Pred. No. 6.4;
Matches 12; Conservative 8; Mismatches 8; Indels 6; Gaps 2;

QY      1 DVSTQAVLPDDPPRY-----PVGKFKFDTRQ 29
      : : : : : : : : : : : : : :
DB      195 DWASRRALPDDPREHYIVIQPTSRWF-FKCWR 227
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RESULT 15
US-09-489-039A-7512
; Sequence 7512, Application US/09489039A
; Patent No. 6610836
; GENERAL INFORMATION:
; APPLICANT: Gary Breton et al
; TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO KLEBSIELLA
; FILE REFERENCE: 2709.2004001
; CURRENT FILING DATE: US/09/489,039A
; CURRENT FILING DATE: 2000-01-27
; PRIOR APPLICATION NUMBER: US 60/117,747
; PRIOR FILING DATE: 1999-01-29
; NUMBER OF SEQ ID NOS: 14342
; SEQ ID NO 7512
; LENGTH: 421
; TYPE: PRT
; ORGANISM: Klebsiella pneumoniae
US-09-489-039A-7512

Query Match      29.3%; Score 54; DB 2; Length 421;
Best Local Similarity 41.7%; Pred. No. 7.4;
Matches 10; Conservative 2; Mismatches 12; Indels 0; Gaps 0;

QY      9 LPDDPPRYPVGKFKFDTRQSG 32
      || : || : || : || : ||
DB      337 LPQYERTPIGKTLFQWHDSSG 360

Search completed: May 21, 2006, 12:48:27
Job time : 32 secs
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GenCore version 5.1.8  
Copyright (c) 1993 - 2006 Bioceleration Ltd.

OM protein - protein search, using sw model

Run on: May 21, 2006, 12:47:06 ; Search time 103 Seconds  
(without alignments)  
152.906 Million cell updates/sec

Title: US-10-632-366-2

Perfect score: 184

Sequence: 1 DVSTSQAVLPDDFPYVGVKFKFDTWRSAGRL 34

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 2097797 seqs, 463214858 residues

Total number of hits satisfying chosen parameters: 2097797

Minimum DB seq length: 0

Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%

Listing first 45 summaries

Database : Published Applications AA Main:\*

- 1: /EMC\_Celerra\_SIDS3/ProdData/2/pubppaa/US07\_PUBCOMB.pep:\*
- 2: /EMC\_Celerra\_SIDS3/ProdData/2/pubppaa/US08\_PUBCOMB.pep:\*
- 3: /EMC\_Celerra\_SIDS3/ProdData/2/pubppaa/US09\_PUBCOMB.pep:\*
- 4: /EMC\_Celerra\_SIDS3/ProdData/2/pubppaa/US10\_PUBCOMB.pep:\*
- 5: /EMC\_Celerra\_SIDS3/ProdData/2/pubppaa/US108\_PUBCOMB.pep:\*
- 6: /EMC\_Celerra\_SIDS3/ProdData/2/pubppaa/US11\_PUBCOMB.pep:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	184	100.0	34	3	US-09-745-078A-3
2	184	100.0	34	4	US-10-374-624-3
3	184	100.0	34	4	US-10-632-366-2
4	184	100.0	180	4	US-10-258-666-2
5	177	96.2	34	3	US-09-745-078A-4
6	177	96.2	34	4	US-10-374-624-4
7	177	96.2	34	4	US-10-632-366-3
8	177	96.2	351	4	US-10-388-838-107
9	142	77.2	34	3	US-09-745-078A-2
10	142	77.2	34	4	US-10-374-624-2
11	142	77.2	34	4	US-10-632-366-1
12	142	77.2	35	6	US-11-066-697-381
13	142	77.2	156	3	US-09-972-809-7
14	142	77.2	156	5	US-10-872-198-122
15	142	77.2	156	6	US-11-021-951-122
16	142	77.2	176	4	US-10-388-838-112
17	142	77.2	180	4	US-10-081-119-38
18	142	77.2	180	4	US-10-136-841-2
19	142	77.2	180	4	US-10-097-340-145
20	142	77.2	180	4	US-10-295-027-199
21	142	77.2	180	4	US-10-272-531A-2
22	142	77.2	180	4	US-10-173-999-99
23	142	77.2	180	4	US-10-272-483A-2
24	142	77.2	180	4	US-10-443-466A-21
25	142	77.2	180	4	US-10-188-832-84
26	142	77.2	180	4	US-10-700-725-19
27	142	77.2	180	4	US-10-706-791-5

28	142	77.2	180	4	US-10-770-668-46	Sequence 46, Appl
29	142	77.2	180	5	US-10-741-600-1133	Sequence 1133, Ap
30	142	77.2	180	5	US-10-951-389-38	Sequence 38, Appl
31	142	77.2	180	5	US-10-951-406-38	Sequence 38, Appl
32	142	77.2	180	5	US-10-951-477-38	Sequence 38, Appl
33	142	77.2	180	5	US-10-977-087-38	Sequence 38, Appl
34	142	77.2	180	5	US-10-981-267-2	Sequence 38, Appl
35	142	77.2	180	6	US-11-049-518-18	Sequence 18, Appl
36	142	77.2	180	6	US-11-050-926-145	Sequence 145, App
37	142	77.2	275	5	US-10-821-234-971	Sequence 971, App
38	138	75.0	33	3	US-09-745-078A-5	Sequence 5, Appl
39	138	75.0	33	4	US-10-374-624-5	Sequence 5, Appl
40	136	73.9	1107	6	US-11-057-028-41	Sequence 41, Appl
41	135	73.4	30	3	US-09-745-078A-8	Sequence 8, Appl
42	135	73.4	30	4	US-10-374-624-8	Sequence 8, Appl
43	135	73.4	31	4	US-09-745-078A-7	Sequence 7, Appl
44	135	73.4	31	4	US-10-374-624-7	Sequence 7, Appl
45	135	73.4	32	3	US-09-745-078A-6	Sequence 6, Appl

## ALIGNMENTS

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RESULT 1
US-09-745-078A-3
; Sequence 3, Application US/09745078A
; Publication No. US20030050434A1
; GENERAL INFORMATION:
; APPLICANT: Garth J. S. COOPER
; APPLICANT: Christina M. BUCHANAN
; TITLE OF INVENTION: PEPTIDE
; FILE REFERENCE: 441842000100
; CURRENT APPLICATION NUMBER: US/09/745, 078A
; PRIOR FILING DATE: 2000-12-20
; PRIOR APPLICATION NUMBER: NZ336359
; PRIOR FILING DATE: 1999-06-18
; PRIOR APPLICATION NUMBER: PCT/NZ00/00102
; NUMBER OF SEQ ID NOS: 35
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 3
; LENGTH: 34
; TYPE: PRT
; ORGANISM: Rattus Sp.
; FEATURE:
; OTHER INFORMATION: Preptin
US-09-745-078A-3

Query Match      100.0%; Score 184; DB 3; Length 34;
Best Local Similarity 100.0%; Pred. No. 2.8e-19;
Matches 34; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      1 DVSTSQAVLPDDFPYVGVKFKFDTWRSAGRL 34
Db      1 DVSTSQAVLPDDFPYVGVKFKFDTWRSAGRL 34

RESULT 2
US-10-374-624-3
; Sequence 3, Application US/10374624
; Publication No. US20030166561A1
; GENERAL INFORMATION:
; APPLICANT: Garth J. S. COOPER
; APPLICANT: Christina M. BUCHANAN
; TITLE OF INVENTION: PEPTIDE
; FILE REFERENCE: 441842000100
; CURRENT APPLICATION NUMBER: US/10/374, 624
; PRIOR FILING DATE: 2003-02-24
; PRIOR APPLICATION NUMBER: US/09/745, 078A
; PRIOR FILING DATE: 2000-12-20
; PRIOR APPLICATION NUMBER: NZ336359
; PRIOR FILING DATE: 1999-06-18
; PRIOR APPLICATION NUMBER: PCT/NZ00/00102
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1 PRIOR FILING DATE: 2000-06-19
2
3 NUMBER OF SEQ ID NOS: 35
4
5 SOFTWARE: FastSeq for Windows Version 4.0
6
7 SEQ ID NO 3
8
9 LENGTH: 34
10
11 TYPE: PRT
12
13 ORGANISM: Rattus Sp.
14
15 FEATURE:
16
17 OTHER INFORMATION: Preptin
18
19 US-10-374-624-3

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Query Match	100.0%	Score 184;	DB 4;	Length 34;
Best Local Similarity	100.0%;	Pred. No. 2.8e-19;		
Matches 34; Conservative	0;	Mismatches 0;	Indels 0;	Gaps 0;

[illegible]

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RESULT 3
US-10-632-366-2
; Sequence 2, Application US/10632366
; Publication No. US20040142392A1
; GENERAL INFORMATION:
; APPLICANT: COOPER, GARTH JAMES SMITH
; APPLICANT: BUCHANAN, CHRISTINE MARIE
; APPLICANT: JAMES, GABRIEL CHRISTOPHER
; TITLE OF INVENTION: METHODS OF USE OF COMPOUNDS WITH PREPRTIN FUNCTION
; FILE REFERENCE: 44123.000033.1U11
; CURRENT APPLICATION NUMBER: US/10/632,366
; CURRENT FILING DATE: 2003-07-31
; PRIOR APPLICATION NUMBER: 60/400,445
; PRIOR FILING DATE: 2002-08-01
; NUMBER OF SEQ ID NOS: 20
; SOFTWARE: PatentIn version 3.2
SEQ ID NO 2
LENGTH: 34
; TYPE: PRT
; ORGANISM: Rattus norvegicus
US-10-632-366-2

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Query Match	100.0%;	Score 184;	DB 4;	Length 34;
Best Local Similarity	100.0%;	Pred. No. 2.8e-19;		
Matches 34; Conservative	0;	Mismatches 0;	Indels 0;	Gaps 0;

QY	1	DVSTSQAVLDDDFPRYPVGKFFKEDTWRQSAGRL	34
Db	1	DVSTSQAVLDDDFPRYPVGKFFKEDTWRQSAGRL	34

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RESULT 4
US-10-258-666-2
Sequence 2, Application US/10258666
Publication No. US20040005578A1
GENERAL INFORMATION:
APPLICANT: Yamada, Yoji
APPLICANT: Sekine, Susumu
APPLICANT: Kikuchi, Yasuhiro
APPLICANT: Sakurada, Kazuhiro
APPLICANT: Kyowa Hakko Kogyo Co., Ltd.
TITLE OF INVENTION: Myocardial Cell Proliferation-Associated Genes
FILE REFERENCE: 082382-000000US
CURRENT APPLICATION NUMBER: US/10/258,666
CURRENT FILING DATE: 2003-05-23
PRIOR APPLICATION NUMBER: JP 2000-126741
PRIOR FILING DATE: 2000-04-27
PRIOR APPLICATION NUMBER: WO PCT/JP01/03700
PRIOR FILING DATE: 2001-04-27
NUMBER OF SEQ ID NOS: 42
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 2
LENGTH: 180

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; TYPE: PRT
; ORGANISM: Rattus norvegicus
; FEATURE:
; OTHER INFORMATION: RHDH-009
;
US-10-258-666-2

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Query Match	100.0%	Score 184;	DB 4;	Length 180;
Best Local Similarity	100.0%;	Pred. No. 1.7e-16;		
Matches 34; Conservative	0;	Mismatches 0;	Indels 0;	Gaps 0;

[illegible]

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US-09-745-078A-4
RESULT 5
Sequence 4, Application US/09745078A
Publication No. US20030050434A1
GENERAL INFORMATION:
APPLICANT: Garch J. S. COOPER
APPLICANT: Christina M. BOCHAMAN
TITLE OR INVENTION: PEPTIDE
FILE REFERENCE: 441842000100
CURRENT APPLICATION NUMBER: US/09/745, 078A
CURRENT FILING DATE: 2000-12-20
PRIOR APPLICATION NUMBER: N2336359
PRIOR FILING DATE: 1999-06-18
PRIOR APPLICATION NUMBER: PCT/NZ00/00102
PRIOR FILING DATE: 2000-06-19
NUMBER OF SEQ ID NOS: 35
SOFTWARE: FastSeq for Windows Version 4.0
SEQ ID NO 4
LENGTH: 34
TYPE: PRT
ORGANISM: Mus Musculus
FEATURE:
OTHER INFORMATION: Preplin
US-09-745-078A-4

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Query Match	96.2%	Score 177;	DB 3;	Length 34;
Best Local Similarity	94.1%;	Pred. No. 2.9e-18;		
Matches 32; Conservative	2;	Mismatches 0;	Indels 0;	Gaps 0;

QY	1	DVSTSQAVLPDDFPRYPVGKFKPKEDTWRSAGRL	34
		:	
Db	1	DVSTSCAVLPDDFPRIYVGKFKFYDTWRSAGRL	34

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RESULT 6
US-10-374-624-4
1. Sequence 4, Application US/10374624
2. Publication No. US20030166561A1
GENERAL INFORMATION:
APPLICANT: Christa M. BUCHANAN
APPLICANT: Christina M. BUCHANAN
TITLE OR INVENTION: PEPTIDE
FILE REFERENCE: 441842000100
CURRENT APPLICATION NUMBER: US/10/374, 624
CURRENT FILING DATE: 2003-02-24
PRIOR APPLICATION NUMBER: US/09/745, 078A
PRIOR FILING DATE: 2000-12-20
PRIOR APPLICATION NUMBER: NZ336359
PRIOR FILING DATE: 1999-06-18
PRIOR APPLICATION NUMBER: PCT/NZ00/00102
PRIOR FILING DATE: 2000-06-19
NUMBER OF SEQ ID NOS: 35
SOFTWARE: FastSeq for Windows Version 4.0.
SEQ ID NO. 4
FASTQ
LENGTH: 34
TYPE: PRT
ORGANISM: Mus Musculus
FEATURE:

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OTHER INFORMATION: Preptin  
US-10-374-624-4

Query Match 96.2%; Score 177; DB 4; Length 34;  
Best Local Similarity 94.1%; Pred. No. 2.9e-18;  
Matches 32; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

QY 1 DVSTQAVLPDDPFRYPVGKFKFDTWROSAGRL 34  
Db 1 DVSTQAVLPDDPFRYPVGKFKFDTWROSAGRL 34

RESULT 7  
US-10-632-366-3

; Sequence 3, Application US/10632366  
; Publication No. US20040142393A1  
; GENERAL INFORMATION:  
; APPLICANT: COOPER, GARTH JAMES SMITH  
; APPLICANT: BUCHANAN, CHRISTINE MARIE  
; APPLICANT: JAMES, GABRIEL CHRISTOPHER  
; TITLE OF INVENTION: METHODS OF USE OF COMPOUNDS WITH PREPTIN FUNCTION  
; FILE REFERENCE: 49123.000033.UTL1  
; CURRENT FILING DATE: 2003-07-31  
; PRIOR APPLICATION NUMBER: US/10/632.366  
; PRIOR FILING DATE: 2002-08-01  
; NUMBER OF SEQ ID NOS: 20  
; SOFTWARE: PatentIn version 3.2  
; SEQ ID NO 3  
; LENGTH: 34  
; TYPE: PRT  
; ORGANISM: Mus musculus  
US-10-632-366-3

Query Match 96.2%; Score 177; DB 4; Length 34;  
Best Local Similarity 94.1%; Pred. No. 2.9e-18;  
Matches 32; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

QY 1 DVSTQAVLPDDPFRYPVGKFKFDTWROSAGRL 34  
Db 1 DVSTQAVLPDDPFRYPVGKFKFDTWROSAGRL 34

RESULT 8  
US-10-388-838-107

; Sequence 107, Application US/10388838  
; Publication No. US20040180344A1  
; GENERAL INFORMATION:  
; APPLICANT: David W. Morris  
; APPLICANT: Marc Malandro  
; TITLE OF INVENTION: Novel Therapeutic Targets in Cancer  
; FILE REFERENCE: 529452001600  
; CURRENT APPLICATION NUMBER: US/10/388.838  
; CURRENT FILING DATE: 2003-03-14  
; NUMBER OF SEQ ID NOS: 114  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 107  
; LENGTH: 351  
; TYPE: PRT  
; ORGANISM: Mus musculus  
US-10-388-838-107

Query Match 96.2%; Score 177; DB 4; Length 351;  
Best Local Similarity 94.1%; Pred. No. 3.7e-17;  
Matches 32; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

QY 1 DVSTQAVLPDDPFRYPVGKFKFDTWROSAGRL 34  
Db 264 DVSTQAVLPDDPFRYPVGKFKFDTWROSAGRL 297

RESULT 9  
US-09-745-078A-2

; Sequence 2, Application US/09745078A  
; Publication No. US20030050434A1  
; GENERAL INFORMATION:  
; APPLICANT: Garth J. S. COOPER  
; APPLICANT: Christina M. BUCHANAN  
; TITLE OF INVENTION: PEPTIDE  
; FILE REFERENCE: 441842000100  
; CURRENT APPLICATION NUMBER: US/09/745.078A  
; PRIOR FILING DATE: 2000-12-20  
; PRIOR APPLICATION NUMBER: NZ36359  
; PRIOR FILING DATE: 1999-06-18  
; PRIOR APPLICATION NUMBER: PCT/NZ00/00102  
; PRIOR FILING DATE: 2000-06-19  
; NUMBER OF SEQ ID NOS: 35  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 2  
; LENGTH: 34  
; TYPE: PRT  
; ORGANISM: Homo Sapien  
; FEATURE:  
; OTHER INFORMATION: Preptin  
US-09-745-078A-2

Query Match 77.2%; Score 142; DB 3; Length 34;  
Best Local Similarity 73.5%; Pred. No. 3.8e-13;  
Matches 25; Conservative 4; Mismatches 5; Indels 0; Gaps 0;

QY 1 DVSTQAVLPDDPFRYPVGKFKFDTWROSAGRL 34  
Db 1 DVSTPPTVLDPDNFPRYPVGKFKFDTWKOSTORL 34

RESULT 10  
US-10-374-624-2

; Sequence 2, Application US/10374624  
; Publication No. US20030166561A1  
; GENERAL INFORMATION:  
; APPLICANT: Garth J. S. COOPER  
; APPLICANT: Christina M. BUCHANAN  
; TITLE OF INVENTION: PEPTIDE  
; FILE REFERENCE: 441842000100  
; CURRENT APPLICATION NUMBER: US/10/374.624  
; CURRENT FILING DATE: 2003-02-24  
; PRIOR APPLICATION NUMBER: US/09/745.078A  
; PRIOR FILING DATE: 2000-12-20  
; PRIOR APPLICATION NUMBER: NZ36359  
; PRIOR FILING DATE: 1999-06-18  
; PRIOR APPLICATION NUMBER: PCT/NZ00/00102  
; PRIOR FILING DATE: 2000-06-19  
; NUMBER OF SEQ ID NOS: 35  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 2  
; LENGTH: 34  
; TYPE: PRT  
; ORGANISM: Homo Sapien  
; FEATURE:  
; OTHER INFORMATION: Preptin  
US-10-374-624-2

Query Match 77.2%; Score 142; DB 4; Length 34;  
Best Local Similarity 73.5%; Pred. No. 3.8e-13;  
Matches 25; Conservative 4; Mismatches 5; Indels 0; Gaps 0;

QY 1 DVSTQAVLPDDPFRYPVGKFKFDTWROSAGRL 34  
Db 1 DVSTPPTVLDPDNFPRYPVGKFKFDTWKOSTORL 34

RESULT 11  
US-10-632-366-1  
; Sequence 1, Application US/10632366  
; Publication No. US20040142393A1  
; GENERAL INFORMATION:

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; APPLICANT: COOPER, GARTH JAMES SMITH
; APPLICANT: BUCHANAN, CHRISTINE MARIE
; APPLICANT: JAMES, GABRIEL CHRISTOPHER
; TITLE OF INVENTION: METHODS OF USE OF COMPOUNDS WITH PREPTIN FUNCTION
; FILE REFERENCE: 49123.000033.UPL1
; CURRENT APPLICATION NUMBER: US/10/632,366
; CURRENT FILING DATE: 2003-07-31
; PRIOR APPLICATION NUMBER: 60/400,445
; PRIOR FILING DATE: 2002-08-01
; NUMBER OF SEQ ID NOS: 20
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 1
; LENGTH: 34
; TYPE: PRT
; ORGANISM: Homo sapiens
; US-10-632-366-1

Query Match          77.2%; Score 142; DB 4; Length 34;
Best Local Similarity 73.5%; Pred. No. 3,8e-13;
Matches 25; Conservative 4; Mismatches 5; Indels 0; Gaps 0;

QY      1 DVSTSQAVLPDDFPRYPVGKFFKFDTWRSAGRL 34
      |||||:|||||:|||||:|||||:|||||
Db      1 DVSTPPTVLPDNPFRYPVGKFFQYDTWKQSTQRL 34

RESULT 12
US-11-066-697-381
; Sequence 381, Application US/11066697
; Publication No. US20050187159A1
; GENERAL INFORMATION:
; APPLICANT: Bridon, Dominique P.
; APPLICANT: Ezrin, Alan M.
; APPLICANT: Milner, Peter G.
; APPLICANT: Holmes, Darren L.
; APPLICANT: Tribudeau, Karen
; TITLE OF INVENTION: PROTECTION OF ENDOGENOUS THERAPEUTIC PEPTIDES FROM
; TITLE OF INVENTION: PEPTIDASE ACTIVITY THROUGH CONJUGATION TO BLOOD
; FILE REFERENCE: 500862002301
; CURRENT APPLICATION NUMBER: US/11/066,697
; CURRENT FILING DATE: 2005-02-25
; PRIOR APPLICATION NUMBER: 09/657,276
; PRIOR FILING DATE: 2000-09-07
; PRIOR APPLICATION NUMBER: 60/153,406
; PRIOR FILING DATE: 1999-09-10
; PRIOR APPLICATION NUMBER: 60/159,783
; PRIOR FILING DATE: 1999-10-15
; NUMBER OF SEQ ID NOS: 1617
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 381
; LENGTH: 35
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
; OTHER INFORMATION: Peptide
; US-11-066-697-381

Query Match          77.2%; Score 142; DB 6; Length 35;
Best Local Similarity 73.5%; Pred. No. 3,9e-13;
Matches 25; Conservative 4; Mismatches 5; Indels 0; Gaps 0;

QY      1 DVSTSQAVLPDDFPRYPVGKFFKFDTWRSAGRL 34
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Db      2 DVSTPPTVLPDNPFRYPVGKFFQYDTWKQSTQRL 35

RESULT 13
US-09-972-809-7
; Sequence 7, Application US/09972809
; Patent No. US20020151490A1
; GENERAL INFORMATION:
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; APPLICANT: Sundeep, Khosla
; APPLICANT: Conover, Cheryl A.
; TITLE OF INVENTION: TREATMENT OF OSTEOPOROSIS
; FILE REFERENCE: 07039/183001
; CURRENT APPLICATION NUMBER: US/09/972,809
; CURRENT FILING DATE: 2001-10-05
; PRIOR APPLICATION NUMBER: 09/428,226
; PRIOR FILING DATE: 1999-10-27
; PRIOR APPLICATION NUMBER: 60/045,607
; PRIOR FILING DATE: 1997-05-05
; NUMBER OF SEQ ID NOS: 7
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 7
; LENGTH: 156
; TYPE: PRT
; ORGANISM: Homo sapiens
; US-09-972-809-7

Query Match          77.2%; Score 142; DB 3; Length 156;
Best Local Similarity 73.5%; Pred. No. 2e-12;
Matches 25; Conservative 4; Mismatches 5; Indels 0; Gaps 0;

QY      1 DVSTSQAVLPDDFPRYPVGKFFKFDTWRSAGRL 34
      |||||:|||||:|||||:|||||:|||||
Db      69 DVSTPPTVLPDNPFRYPVGKFFQYDTWKQSTQRL 102

RESULT 14
US-10-872-198-122
; Sequence 122, Application US/10872198
; Publication No. US20050002897A1
; GENERAL INFORMATION:
; APPLICANT: Ulrich HAUPTS
; APPLICANT: Andre KOLTERMANN
; APPLICANT: Andreas SCHEIDIG
; APPLICANT: Christian VOETSMERIER
; APPLICANT: Ulrich Ketting
; TITLE OF INVENTION: NEW BIOLOGICAL ENTITIES AND USE THEREOF
; FILE REFERENCE: 04156.000204
; CURRENT APPLICATION NUMBER: US/10/872,198
; CURRENT FILING DATE: 2004-06-18
; PRIOR APPLICATION NUMBER: 60/543,518
; PRIOR FILING DATE: 2004-02-11
; PRIOR APPLICATION NUMBER: 60/524,960
; PRIOR FILING DATE: 2003-11-25
; PRIOR APPLICATION NUMBER: EP 04003058
; PRIOR FILING DATE: 2004-02-11
; PRIOR APPLICATION NUMBER: EP 03025871
; PRIOR FILING DATE: 2003-11-11
; PRIOR APPLICATION NUMBER: EP 03025851
; PRIOR FILING DATE: 2003-11-10
; PRIOR APPLICATION NUMBER: EP 03013819
; PRIOR FILING DATE: 2003-06-18
; NUMBER OF SEQ ID NOS: 149
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 122
; LENGTH: 156
; TYPE: PRT
; ORGANISM: Homo sapiens
; US-10-872-198-122

Query Match          77.2%; Score 142; DB 5; Length 156;
Best Local Similarity 73.5%; Pred. No. 2e-12;
Matches 25; Conservative 4; Mismatches 5; Indels 0; Gaps 0;

QY      1 DVSTSQAVLPDDFPRYPVGKFFKFDTWRSAGRL 34
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Db      69 DVSTPPTVLPDNPFRYPVGKFFQYDTWKQSTQRL 102

RESULT 15
US-11-021-951-122
; Sequence 122, Application US/11021951
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; Publication No. US20050175581A1
; GENERAL INFORMATION:
; APPLICANT: HAUPTS, Ulrich
; APPLICANT: KOLTERMANN, Andre
; APPLICANT: SCHEIDIG, Andreas
; APPLICANT: VOTSMEIER, Christian
; APPLICANT: Kettling, Ulrich
; APPLICANT: COCO, Wayne Michael
; TITLE OF INVENTION: New Biological Entities And The Pharmaceutical
; FILE OF INVENTION: And Diagnostic Use Thereof
; FILE REFERENCE: 04156.000205
; CURRENT APPLICATION NUMBER: US/11/021,951
; CURRENT FILING DATE: 2004-12-22
; PRIOR APPLICATION NUMBER: 10/872,198
; PRIOR FILING DATE: 2004-06-18
; PRIOR APPLICATION NUMBER: 60/543,518
; PRIOR FILING DATE: 2004-02-11
; PRIOR APPLICATION NUMBER: 60/524,960
; PRIOR FILING DATE: 2003-11-25
; PRIOR APPLICATION NUMBER: EP 04003058
; PRIOR FILING DATE: 2004-02-11
; PRIOR APPLICATION NUMBER: EP 03025871
; PRIOR FILING DATE: 2003-11-11
; PRIOR APPLICATION NUMBER: EP 03025851
; PRIOR FILING DATE: 2003-11-10
; PRIOR APPLICATION NUMBER: EP 03013819
; PRIOR FILING DATE: 2003-06-18
; NUMBER OF SEQ ID NOS: 191
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 122
; LENGTH: 156
; TYPE: PRT
; ORGANISM: Homo sapiens
; US-11-021-951-122
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Query Match          77.2%; Score 142; DB 6; Length 156;
Best Local Similarity 73.5%; Pred. No. 2e-12;
Matches 25; Conservative 4; Mismatches 5; Indels 0; Gaps 0;
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QY      1 DVSTSQAVLPDDPFRYPVGKFKFEDTWQSGAGRL 34
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Db      69 DVSTPPTVLPDNPFRYPVGKFKFYDWTWKQSTQRL 102
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Search completed: May 21, 2006, 12:53:42  
Job time : 103.333 secs

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OM protein - protein search, using sw model

Run on: May 21, 2006, 12:48:45 ; Search time 4 Seconds  
(without alignments)  
18.157 Million cell updates/sec

Title: US-10-632-366-2

Perfect score: 184  
Sequence: 1 DVSTSQAVLPDDFPRYPVGKFKEDTWRQSA<sup>34</sup>

## Scoring table

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Total number of hits satisfying chosen parameters: 21570

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Minimum DB seq length: 0
Maximum DB seq length: 2000000000
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Post-processing: Minimum Match 0%

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2: /EMC Celerra S10S3/ptcdatara/2/pubppaa/US07 NEW PUB pep:.*
3: /EMC Celerra S10S3/ptcdatara/2/pubppaa/US08 NEW PUB pep:.*
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6: /EMC Celerra S10S3/ptcdatara/2/pubppaa/US01 NEW PUB pep:.*
7: /EMC Celerra S10S3/ptcdatara/2/pubppaa/US01 NEW PUB pep:.*

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

Result No.	Score	Query Match	Length	DB	ID	Description
1	43.5	23.6	477	7	US-11-264-784-112	Sequence 102, App1
2	42	22.8	323	7	US-11-249-111-102	Sequence 102, App1
3	41.5	22.6	492	6	US-10-505-928-408	Sequence 48, App1
4	41.5	22.6	531	6	US-10-505-928-408	Sequence 408, App1
5	40	21.7	309	7	US-11-249-111-72	Sequence 72, App1
6	40	21.5	3396	6	US-10-505-928-449	Sequence 449, App1
7	39.5	21.5	121	6	US-10-196-749-368	Sequence 368, App1
8	39	21.2	1043	6	US-10-511-937-2452	Sequence 2452, App1
9	39	21.2	1333	6	US-10-511-937-2992	Sequence 2992, App1
10	38.5	20.9	191	7	US-11-267-871-342	Sequence 342, App1
11	38.5	20.9	357	7	US-11-301-554-1817	Sequence 1817, App1
12	38.5	20.9	1052	6	US-10-487-088-21	Sequence 21, App1
13	38.5	20.9	1342	6	US-10-487-088-14	Sequence 14, App1
14	38	20.7	847	6	US-10-505-928-300	Sequence 300, App1
15	37.5	20.4	191	7	US-11-267-871-382	Sequence 382, App1
16	37.5	20.4	667	6	US-10-505-928-393	Sequence 393, App1
17	37	20.1	109	7	US-11-254-679-13	Sequence 13, App1
18	37	20.1	120	7	US-11-230-593A-33	Sequence 33, App1
19	37	20.1	477	7	US-11-024-544A-118	Sequence 118, App1
20	37	20.1	477	7	US-11-024-544A-46	Sequence 46, App1
21	37	20.1	477	7	US-11-185-301-34	Sequence 34, App1
22	37	20.1	477	7	US-11-190-750-101	Sequence 101, App1
23	37	20.1	477	7	US-11-251-465-20	Sequence 20, App1
24	37	20.1	477	7	US-11-254-173-34	Sequence 34, App1
25	37	20.1	477	7	US-11-264-784-38	Sequence 38, App1

26	-37	20.1	640	7	US-11-245-638-27	Sequence 27, App1
27	-37	20.1	1871	6	US-10-501-834-26	Sequence 26, App1
28	36.5	19.8	271	6	US-10-511-937-2892	Sequence 2592, App1
29	36	19.6	125	7	US-11-219-563-80	Sequence 80, App1
30	36	19.6	488	7	US-11-242-505A-10	Sequence 30, App1
31	36	19.6	527	6	US-10-514-462-5	Sequence 5, App1
32	36	19.6	653	6	US-10-196-749-49	Sequence 402, App1
33	36	19.6	1067	6	US-10-514-462-2	Sequence 2, App1
34	36	19.6	2026	6	US-10-505-928-831	Sequence 831, App1
35	35.5	19.3	191	7	US-11-267-871-340	Sequence 340, App1
36	35.5	19.3	191	7	US-11-267-871-343	Sequence 343, App1
37	35.5	19.3	252	6	US-10-196-749-92	Sequence 302, App1
38	35.5	19.3	252	7	US-11-101-316-82	Sequence 92, App1
39	35.5	19.3	291	7	US-11-154-1103-9	Sequence 9, App1
40	35.5	19.3	439	7	US-11-242-111-25	Sequence 25, App1
41	35.5	19.3	1186	6	US-10-511-937-2566	Sequence 2566, App1
42	35	19.0	123	7	US-11-254-182-34	Sequence 34, App1
43	35	19.0	194	6	US-10-505-928-791	Sequence 791, App1
44	35	19.0	325	6	US-10-511-937-2979	Sequence 2979, App1
45	35	19.0	332	7	US-11-246-999-32	Sequence 32, App1

## ALIGNMENTS

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RESULT 1
US-11-264-784-112
; Sequence 112, Application US/11264784
; Publication No. US20060094092A1
; GENERAL INFORMATION:
; APPLICANT: E.I. duPont de Nemours & Co., Inc.
; APPLICANT: Damude, Howard Glenn
; APPLICANT: Gillies, Peter John
; APPLICANT: Maccoll, Daniel Joseph
; APPLICANT: Picataggio, Stephen K.
; APPLICANT: Pollak, Dana M. Walters
; APPLICANT: Ragghianti, James John
; APPLICANT: Xue, Zhixiong
; APPLICANT: Yadav, Narendra S.
; APPLICANT: Zhang, Hongxiang
; APPLICANT: Zhu, Qunin
; TITLE OF INVENTION: HIGH ARACHIDONIC ACID PRODUCING STRAINS OF YARROWIA LIPOLYTICA
; FILE REFERENCE: CL3136 USA
; CURRENT APPLICATION NUMBER: US/11/264,784
; CURRENT FILING DATE: 2005-11-01
; NUMBER OF SEQ ID NOS: 375
; SOFTWARE: PatentIn version 3.3
; SEQ ID NO 112
; LENGTH: 477
; TYPE: PRT
; ORGANISM: Saccharomyces cerevisiae (GenBank Accession No. NP_010935)
US-11-264-784-112

Query Match      23.6%; Score 43.5; DB 7; Length 477;
Best Local Similarity 34.8%; Pred. No. 22;
Matches      8; Conservative      6; Mismatches      8; Indels      1; Gaps      1;

QY      5 SQAVLPDPFRYPYVGKTFKFDTW 27
      :|::|:|:|:|:|:|:|:|:|
Db      26 TNAIMSDNSKAYSI-KFLTENTW 47

RESULT 2
US-11-269-111-102
; Sequence 102, Application US/11249111
; Publication No. US2006009623A1
; GENERAL INFORMATION:
; APPLICANT: Glenn, Matthew
; APPLICANT: Lubbers, Mark W
; APPLICANT: Dekker, James
; TITLE OF INVENTION: Polynucleotides and polypeptides isolated from Lactobacillus
; TITLE OF INVENTION: and methods for their use.
; FILE REFERENCE: 13353.1048u1c2

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Db 390 VITERP--PVGNIVSPE 405

```

RESULT 7
US-10-196-749-368
; Sequence 368, Application US/10196749
; Publication No. US20060094864A1
; GENERAL INFORMATION:
; APPLICANT: Baker, Kevin P.
; APPLICANT: Chen, Jian
; APPLICANT: Desnoyers, Luc
; APPLICANT: Goddard, Audrey
; APPLICANT: Godowski, Paul J.
; APPLICANT: Gurney, Austin L.
; APPLICANT: Pan, James
; APPLICANT: Smith, Victoria
; APPLICANT: Watanabe, Colin K.
; APPLICANT: Wood, William I.
; APPLICANT: Zhang, Zemin
; TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC
; FILE REFERENCE: P3430R1C340
; CURRENT APPLICATION NUMBER: US/10/196,749
; PRIOR FILING DATE: 2002-07-16
; PRIOR APPLICATION NUMBER: 10/052586
; PRIOR FILING DATE: 2002-01-15
; PRIOR APPLICATION NUMBER: 60/059263
; PRIOR FILING DATE: 1997-09-18
; PRIOR APPLICATION NUMBER: 60/059266
; PRIOR FILING DATE: 1997-09-18
; PRIOR APPLICATION NUMBER: 60/062250
; PRIOR FILING DATE: 1997-10-17
; PRIOR APPLICATION NUMBER: 60/063120
; PRIOR FILING DATE: 1997-10-24
; PRIOR APPLICATION NUMBER: 60/063121
; PRIOR FILING DATE: 1997-10-24
; PRIOR APPLICATION NUMBER: 60/063486
; PRIOR FILING DATE: 1997-10-21
; PRIOR APPLICATION NUMBER: 60/063540
; PRIOR FILING DATE: 1997-10-28
; PRIOR APPLICATION NUMBER: 60/063541
; PRIOR FILING DATE: 1997-10-28
; PRIOR APPLICATION NUMBER: 60/063544
; PRIOR FILING DATE: 1997-10-28
; PRIOR APPLICATION data removed - See File Wrapper or PALM.
; NUMBER OF SEQ ID NOS: 612
; SEQ ID NO 368
; LENGTH: 121
; TYPE: PRT
; ORGANISM: Homo Sapien
US-10-196-749-368

Query Match 21.5%; Score 39.5; DB 6; Length 121;
Best Local Similarity 40.0%; Pred. No. 18;
Matches 10; Conservative 2; Mismatches 8; Indels 5; Gaps 1;
QY 7 AVLPPDPFPRYPVGKFFKFTWRQSA 31
Db 21 AVLTDVDPQEPVPTL-----WNEPA 40

RESULT 8
US-10-511-937-2452
; Sequence 2452, Application US/10511937
; Publication No. US2006008836A1
; GENERAL INFORMATION:
; APPLICANT: EXPRESSION DIAGNOSTICS, INC.
; APPLICANT: Wohlgenuth, Jay
; APPLICANT: Fry, Kirk
; APPLICANT: Woodward, Robert
; APPLICANT: Ly, Ngoc
; APPLICANT: Prentice, James

```

```

; APPLICANT: Morris, MacDonald
; APPLICANT: Rosenberg, Steven
; TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR DIAGNOSING
; TITLE OF INVENTION: AND MONITORING TRANSPLANT REJECTION
; FILE REFERENCE: 506612000104
; CURRENT APPLICATION NUMBER: US/10/511,937
; CURRENT FILING DATE: 2004-10-19
; PRIOR APPLICATION NUMBER: PCT/US2003/012946
; PRIOR FILING DATE: 2003-04-24
; PRIOR APPLICATION NUMBER: US 10/131,831
; PRIOR FILING DATE: 2002-04-24
; PRIOR APPLICATION NUMBER: US 10/325,899
; PRIOR FILING DATE: 2002-12-20
; NUMBER OF SEQ ID NOS: 3117
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 2452
; LENGTH: 1043
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-511-937-2452

Query Match 21.2%; Score 39; DB 6; Length 1043;
Best Local Similarity 38.1%; Pred. No. 2.2e+02;
Matches 8; Conservative 5; Mismatches 8; Indels 0; Gaps 0;
QY 11 DDFRRYPVGKFFKFTWRQSA 31
Db 549 DDYVDVTIARFRYSALVSA 569

RESULT 9
US-10-511-937-2992
; Sequence 2992, Application US/10511937
; Publication No. US2006008836A1
; GENERAL INFORMATION:
; APPLICANT: EXPRESSION DIAGNOSTICS, INC.
; APPLICANT: Wohlgenuth, Jay
; APPLICANT: Fry, Kirk
; APPLICANT: Woodward, Robert
; APPLICANT: Ly, Ngoc
; APPLICANT: Prentice, James
; APPLICANT: Morris, MacDonald
; APPLICANT: Rosenberg, Steven
; TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR DIAGNOSING
; TITLE OF INVENTION: AND MONITORING TRANSPLANT REJECTION
; FILE REFERENCE: 506612000104
; CURRENT APPLICATION NUMBER: US/10/511,937
; CURRENT FILING DATE: 2004-10-19
; PRIOR APPLICATION NUMBER: PCT/US2003/012946
; PRIOR FILING DATE: 2003-04-24
; PRIOR APPLICATION NUMBER: US 10/131,831
; PRIOR FILING DATE: 2002-04-24
; PRIOR APPLICATION NUMBER: US 10/325,899
; PRIOR FILING DATE: 2002-12-20
; NUMBER OF SEQ ID NOS: 3117
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 2992
; LENGTH: 1333
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-511-937-2992

Query Match 21.2%; Score 39; DB 6; Length 1333;
Best Local Similarity 50.0%; Pred. No. 2.9e+02;
Matches 7; Conservative 3; Mismatches 4; Indels 0; Gaps 0;
QY 3 STSQAVLPDPFPRYP 16
Db 587 ASGEAVYCDIPRY 600

RESULT 10
US-11-267-871-342

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; Sequence 342, Application US/11267871
; Publication No. US20060094655A1
; GENERAL INFORMATION:
; APPLICANT: Guyon, Thierry
; APPLICANT: Borrelli, Gilles
; APPLICANT: Driteanti, Lila
; APPLICANT: Vega, Manuel
; TITLE OF INVENTION: MODIFIED GROWTH HORMONES
; FILE REFERENCE: 17109-015001/925
; CURRENT APPLICATION NUMBER: US/11/267,871
; CURRENT FILING DATE: 2005-11-03
; PRIOR APPLICATION NUMBER: 60/706,697
; PRIOR FILING DATE: 2005-08-08
; PRIOR APPLICATION NUMBER: 60/625,652
; PRIOR FILING DATE: 2004-11-04
; NUMBER OF SEQ ID NOS: 719
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 342
; LENGTH: 191
; TYPE: PRT
; ORGANISM: Homo Sapiens
US-11-267-871-342

Query Match      20.9%; Score 38.5; DB 7; Length 191;
Best Local Similarity 40.0%; Pred. No. 42;
Matches 12; Conservative 2; Mismatches 9; Indels 7; Gaps 2;

QY      2 VSTSQAVLPDDPFRYPVGKFF-----KFDPT 26
Db      121 IQTSMGRLEDSGR--TGGTFKQYKSPDR 148

RESULT 11
US-11-301-554-1817
; Sequence 1817, Application US/11301554
; Publication No. US20060088527A1
; GENERAL INFORMATION:
; APPLICANT: Henderson, Robert A.
; APPLICANT: Wang, Tonglong
; APPLICANT: Matanabe, Yoshihiro
; APPLICANT: Kalos, Michael D.
; APPLICANT: Sleath, Paul R.
; APPLICANT: Johnson, Jeffrey C.
; APPLICANT: Retler, Marc W.
; APPLICANT: Durham, Margarita
; APPLICANT: Carter, Darrick
; APPLICANT: Fanger, Gary R.
; APPLICANT: Vedvick, Thomas S.
; APPLICANT: Bangur, Andria
; APPLICANT: McNabb, Andria
; TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY
; TITLE OF INVENTION: AND DIAGNOSIS OF LUNG CANCER
; FILE REFERENCE: 210121.478C21
; CURRENT APPLICATION NUMBER: US/11/301,554
; CURRENT FILING DATE: 2005-12-13
; PRIOR APPLICATION NUMBER: US 10/283,017
; PRIOR FILING DATE: 2002-10-28
; PRIOR APPLICATION NUMBER: US 10/113,872
; PRIOR FILING DATE: 2002-03-28
; PRIOR APPLICATION NUMBER: US 10/017,754
; PRIOR FILING DATE: 2001-10-29
; PRIOR APPLICATION NUMBER: US 09/902,941
; PRIOR FILING DATE: 2001-07-10
; PRIOR APPLICATION NUMBER: US 09/849,626
; PRIOR FILING DATE: 2001-05-03
; PRIOR APPLICATION NUMBER: US 09/736,457
; PRIOR FILING DATE: 2000-12-13
; PRIOR APPLICATION NUMBER: US 09/702,705
; PRIOR FILING DATE: 2000-10-30
; PRIOR APPLICATION NUMBER: US 09/677,419
; PRIOR FILING DATE: 2000-10-06
; PRIOR APPLICATION NUMBER: US 09/671,325
; PRIOR FILING DATE: 2000-09-26
```

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; PRIOR APPLICATION NUMBER: US 09/658,824
; PRIOR FILING DATE: 2000-09-08
; Remaining Prior Application data removed - See file wrapper or PALM.
; NUMBER OF SEQ ID NOS: 2157
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 1817
; LENGTH: 357
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-301-554-1817

Query Match      20.9%; Score 38.5; DB 7; Length 357;
Best Local Similarity 42.9%; Pred. No. 82;
Matches 9; Conservative 2; Mismatches 9; Indels 1; Gaps 1;

QY      13 PFRYPVGKFKFDPTWQSGR 33
Db      294 YFTYPVG-PAWYPVGRDQGR 313

RESULT 12
US-10-497-088-21
; Sequence 21, Application US/10497088
; Publication No. US20060088520A1
; GENERAL INFORMATION:
; APPLICANT: Crucell Holland B.V.
; APPLICANT: Logtenberg, Ton
; APPLICANT: Logtenberg, Ton
; APPLICANT: Lekkemaker, Annemarie N
; TITLE OF INVENTION: Antigen presenting cell targeting conjugate, an antigen
; TITLE OF INVENTION: vaccination cell contacted with such conjugate, their use for
; TITLE OF INVENTION: vaccination or as medicament, and methods for their production
; TITLE OF INVENTION: generation
; FILE REFERENCE: 0070 US 00 CON
; CURRENT APPLICATION NUMBER: US/10/497,088
; CURRENT FILING DATE: 2004-05-28
; PRIOR APPLICATION NUMBER: PCT/EP01/14255
; PRIOR FILING DATE: 2001-11-30
; PRIOR APPLICATION NUMBER: PCT/EP02/13681
; PRIOR FILING DATE: 2002-11-29
; PRIOR APPLICATION NUMBER: EP01204997.9
; PRIOR FILING DATE: 2001-12-19
; NUMBER OF SEQ ID NOS: 21
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 21
; LENGTH: 1052
; TYPE: PRT
; ORGANISM: Artificial
; FEATURE:
; OTHER INFORMATION: MatDC16-Cgamma4-MAGE-1
; NAME/KEY: misc_feature
; LOCATION: (546)..(546)
; OTHER INFORMATION: Xaa can be any naturally occurring amino acid
US-10-497-088-21

Query Match      20.9%; Score 38.5; DB 6; Length 1052;
Best Local Similarity 34.2%; Pred. No. 2,6e+02;
Matches 13; Conservative 3; Mismatches 13; Indels 9; Gaps 2;

QY      1 DVSTSQAVL-----PDDPFRYPVGK---FFKFDPTWRQ 29
Db      94 DYSTSTAYWELRSRSDDTAYVYCARASLYSKFDYWGQ 131

RESULT 13
US-10-497-088-14
; Sequence 14, Application US/10497088
; Publication No. US20060088520A1
; GENERAL INFORMATION:
; APPLICANT: Crucell Holland B.V.
; APPLICANT: Germeaad, Wilfred
; APPLICANT: Logtenberg, Ton
```

```
; APPLICANT: Lekkerkerker, Annemarie N
; TITLE OF INVENTION: Antigen presenting cell targeting conjugate, an antigen
; TITLE OF INVENTION: presenting cell contacted with such conjugate, their use for
; TITLE OF INVENTION: vaccination or as medicament, and methods for their production
; FILE REFERENCE: 0070 US 00 CON
; CURRENT APPLICATION NUMBER: US/10/497,088
; PRIOR FILING DATE: 2004-05-28
; PRIOR APPLICATION NUMBER: PCT/EP01/14255
; PRIOR FILING DATE: 2001-11-30
; PRIOR APPLICATION NUMBER: PCT/EP02/13681
; PRIOR FILING DATE: 2002-11-29
; PRIOR APPLICATION NUMBER: EP01204997.9
; PRIOR FILING DATE: 2001-12-19
; NUMBER OF SEQ ID NOS: 21
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 14
; LENGTH: 1342
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: MatDC16-Cgamma4-WAG-A1
; NAME/KEY: MISC FEATURE
; LOCATION: (836)..(836)
; OTHER INFORMATION: xaa can be any amino acid
US-10-497-088-14
```

```
Query Match          20.9%; Score 38.5; DB 6; Length 1342;
Best Local Similarity 34.2%; Pred. No. 3.4e+02;
Matches 13; Conservative 3; Mismatches 13; Indels 9; Gaps 2;
```

```
QY      1 DVSTSQAVL-----PDDPRYPVGK--FFKPDTRQ 29
DB      384 DTSTAYWELRSLRSDPTAVYVCARASLYSKFDYWCQ 421
```

```
RESULT 14
US-10-505-928-300
; Sequence 300, Application US/10505928
; Publication No. US20060088532A1
; GENERAL INFORMATION:
; APPLICANT: Ludwig Institute for Cancer Research et al.
; TITLE OF INVENTION: LYMPHATIC ENDOTHELIAL GENES
; FILE REFERENCE: 28967/39178
; CURRENT APPLICATION NUMBER: US/10/505,928
; PRIOR FILING DATE: 2004-08-27
; PRIOR APPLICATION NUMBER: US 60/363,019
; PRIOR FILING DATE: 2002-03-07
; NUMBER OF SEQ ID NOS: 866
; SOFTWARE: PatentIn 3.2
; SEQ ID NO 300
; LENGTH: 847
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-505-928-300
```

```
Query Match          20.7%; Score 38; DB 6; Length 847;
Best Local Similarity 46.7%; Pred. No. 2.5e+02;
Matches 7; Conservative 3; Mismatches 5; Indels 0; Gaps 0;
```

```
QY      4 TSOAVLPDDPRYPV 18
DB      376 TNHTVLPALERMPV 390
```

```
RESULT 15
US-11-267-871-282
; Sequence 282, Application US/11267871
; Publication No. US20060094655A1
; GENERAL INFORMATION:
; APPLICANT: Guyon, Thierry
; APPLICANT: Borrelly, Gilles
```

```
; APPLICANT: Dittanti, Lila
; APPLICANT: Vega, Manuel
; TITLE OF INVENTION: MODIFIED GROWTH HORMONES
; FILE REFERENCE: 17109-015001/925
; CURRENT APPLICATION NUMBER: US/11/267,871
; PRIOR FILING DATE: 2005-11-03
; PRIOR APPLICATION NUMBER: 60/706,697
; PRIOR FILING DATE: 2005-08-08
; PRIOR APPLICATION NUMBER: 60/625,652
; PRIOR FILING DATE: 2004-11-04
; NUMBER OF SEQ ID NOS: 719
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 282
; LENGTH: 191
; TYPE: PRT
; ORGANISM: Homo Sapiens
US-11-267-871-282
```

```
Query Match          20.4%; Score 37.5; DB 7; Length 191;
Best Local Similarity 26.7%; Pred. No. 58;
Matches 8; Conservative 5; Mismatches 4; Indels 13; Gaps 1;
```

```
QY      13 FPRYPVGKFF-----KPDTRQ 29
DB      1 FPLTPLSLFDNMLRAHRLHQKFDYQGE 30
```

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Search completed: May 21, 2006, 12:54:00
Job time : 5 secs
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GenCore version 5.1.8  
Copyright (c) 1993 - 2006 Bioceleration Ltd.

OM protein - protein search, using sw model

Run on: May 21, 2006, 12:31:21 ; Search time 120.333 Seconds  
(without alignments)  
129.186 Million cell updates/sec

Title: US-10-632-366-3

Perfect score: 185

Sequence: 1 DVSTSGAVLPDPFRYPVGKFPQYDTWRQSAGRL 34

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 2589679 segs, 457216429 residues

Total number of hits satisfying chosen parameters: 2589679

Minimum DB seq length: 0

Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : A\_Geneseq 8:\*

1: geneseqp1980s:\*

2: geneseqp1990s:\*

3: geneseqp2000s:\*

4: geneseqp2001s:\*

5: geneseqp2002s:\*

6: geneseqp2003as:\*

7: geneseqp2003bs:\*

8: geneseqp2004s:\*

9: geneseqp2005s:\*

10: geneseqp2006s:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	185	100.0	34	4 AAB31483	Aab31483 Amino aci
2	185	100.0	34	8 ADM35843	Adm35843 Mouse pre
3	185	100.0	34	8 ADM96216	Adm96216 Murine pr
4	185	100.0	353	8 ABO84530	Abo84530 Mouse can
5	177	95.7	34	4 AAB31482	Aab31482 Amino aci
6	177	95.7	34	8 ADM35842	Adm35842 Rat prept
7	177	95.7	34	8 ADM96217	Adm96217 Rat prept
8	177	95.7	180	5 ABB57375	Abb57375 Rat mucoc
9	177	95.7	180	7 ADD46366	Add46366 Rat Prote
10	150	81.1	34	4 AAB31481	Aab31481 Amino aci
11	150	81.1	34	8 ADM35841	Adm35841 Human pre
12	150	81.1	34	8 ADM96218	Adm96218 Human pre
13	150	81.1	35	4 AAB91207	Aab91207 Insulin a
14	150	81.1	155	9 AED59621	Aed59621 Human ins
15	150	81.1	156	9 ADV90292	Adv90292 Protease-
16	150	81.1	180	1 AAP60579	Aap60579 Human pre
17	150	81.1	180	3 AAY70364	Aay70364 Insulin-1
18	150	81.1	180	5 ABG96345	Abg96345 Human ova
19	150	81.1	180	5 ABP54951	Abp54951 Human IGF
20	150	81.1	180	6 ABR48184	Ab48184 Human bla
21	150	81.1	180	6 AAB33320	Aae33320 Human ins
22	150	81.1	180	7 ABU61624	Abu61624 Human ins
23	150	81.1	180	7 ADB80535	Adb80535 Ovarian c

24	150	81.1	180	7	ADD46367	Add46367 Human Pro
25	150	81.1	180	7	ADN38881	Adn38881 Cancer/pan
26	150	81.1	180	8	ADF47499	Adf47499 Human IGF
27	150	81.1	180	8	ADH17912	Adh17912 Human ins
28	150	81.1	180	8	ADJ58605	Adj58605 Human ins
29	150	81.1	180	8	ADR08576	Adr08576 Human pro
30	150	81.1	180	8	ADR46399	Adr46399 Human ins
31	150	81.1	180	8	ABM81211	Abm81211 Tumour-as
32	150	81.1	180	8	ABO84532	Abo84532 Human can
33	150	81.1	180	8	ADQ39470	Adq39470 Human myo
34	150	81.1	180	9	ADY68802	Ady68802 Human IGF
35	150	81.1	180	9	AEA89444	Aea89444 Human ins
36	150	81.1	180	9	AED08781	Aed08781 Human ins
37	150	81.1	180	10	AER05090	Aer05090 Human ins
38	150	81.1	262	5	ABP69409	Abp69409 Human pol
39	150	81.1	275	9	AED74143	Aed74143 Human pla
40	146	78.9	33	4	AAB31484	Aab31484 Amino aci
41	145	78.4	180	1	AAP93525	Aap93525 Sequence
42	143	77.3	30	4	AAB31487	Aab31487 Amino aci
43	143	77.3	31	4	AAB31486	Aab31486 Amino aci
44	143	77.3	32	4	AAB31485	Aab31485 Amino aci
45	139	75.1	29	4	AAB31488	Aab31488 Amino aci

ALIGNMENTS

RESULT 1	
ID AAB31483	AAB31483 standard; peptide; 34 AA.
XX	
AC AAB31483;	
XX	
DT 20-APR-2001 (first entry)	
XX	
DE Amino acid sequence of mouse preptin peptide.	
XX	
KW Bioactive peptide; preptin; pancreatic islet beta-cell;	
KW glucose-mediated insulin secretion; insulin synthesis; type II diabetes;	
XX	
OS Homo sapiens.	
XX	
PN WO200078805-A1.	
XX	
PD 28-DEC-2000.	
XX	
PF 19-JUN-2000; 2000WO-NZ000102.	
XX	
PR 18-JUN-1999; 99NZ-00336359.	
XX	
PA (COOP/) COOPER G J S.	
XX	
BU (BUCH/) BUCHANAN C M.	
XX	
PI Cooper GJS, Buchanan CM;	
XX	
DR WPI; 2001-112313/12.	
XX	
N-PSDB; AAF24867.	
PT New mammalian peptide with preptin functionality, useful for preventing	
PT or treating Type 2 diabetes mellitus by stimulating insulin secretion.	
XX	
PS Claim 5; Page 27; 51pp; English.	
XX	
CC The present sequence represents a mouse preptin peptide. The peptide	
CC corresponds to Arg69-Ileu102 of the proIGF-II B peptide. Preptin is	
CC secreted by pancreatic islet beta-cells which enhances glucose-mediated	
CC insulin secretion. Preptin peptides and their analogues are useful in	
CC preparing medicaments for preventing or treating a condition which	
CC results in or involves deficient insulin synthesis, secretion or action	
CC e.g. type II diabetes. Antibodies specific to preptin peptides are useful	
CC in an immunological assay such as radioimmunoassay (RIA), IRMA	
CC (undefined) or Enzyme linked immunosorbent assay (ELISA) for	

quantitatively measuring preptin in a biological fluid preferably in cerebrospinal fluid. Agonists or antagonists of preptin peptides are useful for modulating glucose mediated insulin secretion

Sequence 34 AA;

Query Match 100.0%; Score 185; DB 4; Length 34;  
Best Local Similarity 100.0%; Pred. No. 3.3e-20;  
Matches 34; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

1 DVSTSQAVLPDDPPRYVGKFFQYDTWRSAGRL 34  
1 DVSTSQAVLPDDPPRYVGKFFQYDTWRSAGRL 34

RESULT 2  
ADM35843  
ID ADM35843 standard; peptide; 34 AA.

ADM35843;  
03-JUN-2004 (first entry)

Mouse preptin, SEQ ID NO:3, useful for treating beta-cell disorders.

Mouse; murine; preptin; pancreatic islet beta-cell; fibroblast; proliferation; differentiation; beta-cell disorder; diabetes; insulin resistance; insulin resistance; insulin secretion disorder; hyperglycaemia; wound; burns; ulcer; mucous membrane disruption; peripheral nervous system injury; Alzheimer's disease; Parkinson's disease; stroke; amyotrophic lateral sclerosis; muscular dystrophy; diabetic neuropathy; myocardiopathy; myocardial infarction; cardiac disease; acute renal insufficiency; ischaemia; antidiabetic; vulnary; antilucer; antinflammatory; gastrointestinal; nocrotic; neuroprotective; antiparkinsonian; cerebroprotective; muscular; cardiac; nephrotropic; dermatological; protein therapy.

Mus sp.

MO2004012761-A1.

12-FEB-2004.

01-AUG-2003; 2003WO-NZ000171.

01-AUG-2002; 2002NZ-00520536.

01-AUG-2002; 2002US-0400445P.

(PROT-) PROTETIX CORP LTD.

Cooper GJS, Buchanan CM, James GC,

WPI; 2004-157011/15.

Use of preptin, preptin analogs, preptin agonists, their salts or derivatives, for treating a mediated disease, disorder or condition mediated in whole or in part by beta-cells or beta-cell dysfunction, e.g. ulcers or inflammation.

Claim 2; SEQ ID NO 3; 63pp; English.

The invention relates to a method for treating a disorder mediated by pancreatic islet beta-cells or beta-cell dysfunction by administering preptin (ADM35841-ADM35843), preptin analogues, preptin agonists or salts or derivatives thereof. Preptin are able to stimulate the proliferation and differentiation of beta-cells and fibroblasts. Preptin, preptin analogues, preptin agonists, their salts and derivatives are useful in the treatment of internal or external injuries or wounds (e.g., burns, ulcers, surgical wounds or mucous membrane disruption); conditions characterised by decreased beta-cell mass or number; beta-cell mediated diseases (e.g., type 1 or type 2 diabetes); and conditions characterised by insulin resistance, undesirably low

insulin secretion, hyperglycaemia or post-prandial hyperglycaemia. They may also be used for treating and/or preventing peripheral nervous system injury; Alzheimer's disease; Parkinson's disease; stroke; amyotrophic lateral sclerosis; muscular dystrophy; diabetic neuropathy; cardiac myocardiopathies such as myocarditis and myocardial infarction; cardiac disease and acute attack; and acute renal insufficiency caused by ischaemia. They are additionally useful for increasing or maintaining beta-cell mass or beta-cell number; for stimulating beta-cell proliferation via cell differentiation or neogenesis; for increasing type cell mass via cell differentiation or neogenesis; for decreasing cell death of motor neurons; for increasing muscular end plates; promoting the functional recovery of damaged sciatic nerves; preventing peripheral motor paralysis during or as a result of chemotherapy; and for improving myocardial function. The present sequence represents mouse preptin, which is specifically claimed for use in the method of the invention.

Sequence 34 AA;

Query Match 100.0%; Score 185; DB 8; Length 34;  
Best Local Similarity 100.0%; Pred. No. 3.3e-20;  
Matches 34; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

1 DVSTSQAVLPDDPPRYVGKFFQYDTWRSAGRL 34  
1 DVSTSQAVLPDDPPRYVGKFFQYDTWRSAGRL 34

RESULT 3  
ADM96216  
ID ADM96216 standard; peptide; 34 AA.

ADM96216;

17-JUN-2004 (first entry)

Murine preptin peptide used to treat various bone conditions SeqID 1.

osteoblast growth; osteoblast apoptosis; preptin; proinsulin-like growth factor II; osteoporosis; osteopenia; osteogenesis imperfecta; primary hyperparathyroidism; endocrine disorder; corticosteroid treatment; autoimmune arthritis; drug use; murine; mouse.

Mus sp.

MO2004012760-A1.

12-FEB-2004.

31-JUL-2003; 2003WO-NZ000168.

01-AUG-2002; 2002US-0400443P.

(AUCK-) AUCKLAND UNISERVICES LTD.

Cornish J, Reid IR, Cooper GJS, Buchanan CM;

WPI; 2004-157010/15.

Use of preptin, preptin analog or preptin agonist for treating a bone condition (e.g. osteoporosis or osteopenia), increasing or maintaining bone density, stimulating osteoblast growth, or modulating osteoblast apoptosis.

Claim 2; SEQ ID NO 1; 29pp; English.

This invention relates to a novel method for treating a bone condition. Specifically, it refers to increasing or maintaining bone density, stimulating osteoblast growth, or modulating osteoblast apoptosis. The present invention comprises administering preptin, a preptin analogue or agonist thereof, which corresponds to residues Asp-69 to Leu-102 of the proinsulin-like growth factor II that is co-secreted with insulin from pancreatic islet beta cells in response to glucose. Accordingly, such compositions that exhibit osteopathic activities can be used to treat or

CC ameliorate diseases including osteoporosis, osteopenia, bone defects or  
CC osteogenesis imperfecta, as well as bone loss resulting from primary  
CC hyperparathyroidism, endocrine disorders, corticosteroid treatment,  
CC autoimmune arthritis or addictive drug use. This peptide sequence is the  
CC murine prepropeptide of the invention.  
XX  
SQ Sequence 34 AA;  
  
Query Match 100.0%; Score 185; DB 8; Length 34;  
Best Local Similarity 100.0%; Pred. No. 3.3e-20;  
Matches 34; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
  
QY 1 DVSTSQAVLPDPFPRYPVGKFFQYDTWRQSAAGRL 34  
1 DVSTSQAVLPDPFPRYPVGKFFQYDTWRQSAAGRL 34  
Db  
  
RESULT 4  
ID ABO84530 standard; protein; 353 AA.  
XX ABO84530;  
AC  
XX  
XX ABO84530;  
DT 18-NOV-2004 (first entry)  
XX  
DE Mouse cancer-associated protein MP15-022.1.  
XX  
KM Mouse; cancer-associated protein; cytostatic; cancer; leukaemia;  
XX lymphoma; CAP.  
XX  
XX Mus musculus.  
XX  
XX WO2004074320-A2.  
PN  
PD 02-SEP-2004.  
XX  
PF 17-FEB-2004; 2004WO-US004730.  
XX  
XX 14-FEB-2003; 2003US-00367094.  
PR 14-MAR-2003; 2003US-00388838.  
PR 15-APR-2003; 2003US-00417375.  
PR 13-JUN-2003; 2003US-00461862.  
PR 15-SEP-2003; 2003US-00663431.  
PR 15-DEC-2003; 2003US-00737318.  
XX  
XX (SAGR-) SAGRES DISCOVERY INC.  
PA  
PI Morris DW, Morris DW, Malandro MS;  
XX  
XX MPI; 2004-652914/63.  
DR  
DR N-PSDB; ABD32743.  
XX  
XX New isolated cancer-associated polynucleotides and polypeptides useful  
XX for diagnosing, preventing or treating cancers, especially lymphoma and  
XX leukemia, or in screening for agents that modulate cancer.  
XX  
XX disclosure, seqid 339, 310pp; English.  
XX  
XX The invention relates to an isolated nucleic acid comprising at least 10  
XX contiguous nucleotides of any of the 233 polynucleotide sequences given  
XX in the specification, or its complement. The nucleic acids encode cancer-  
XX associated proteins. Also included are an expression vector comprising  
XX the isolated nucleic acid cited above, a host cell comprising the above  
XX recombinant nucleic acid or expression vector, a microarray for detecting  
XX a cancer-associated (CA) nucleic acid comprising at least one probe  
XX comprising at least 10 contiguous nucleotides of any of the above-  
XX mentioned nucleotide sequences, an isolated polypeptide (encoded within  
XX an open reading frame of a CA sequence selected from any of the 95  
XX polynucleotide sequences as mentioned in the specification, or its  
XX complement), an isolated antibody, (or its antigen binding fragment) that  
XX binds to the above polypeptide, a hybridoma that produces the above  
XX monoclonal antibody, a pharmaceutical composition comprising the above  
XX antibody and a pharmaceutical excipient, a kit for detecting cancer

CC cells (comprising the antibody cited above, methods for diagnosing cancer  
CC or for detecting the presence or absence of cancer cells in an  
CC individual, a method for inhibiting growth of cancer cells in an  
CC individual, a method for delivering a therapeutic agent to cancer cells  
CC in an individual, an electronic library comprising the above  
CC polynucleotide or polypeptide (or their fragments), methods of screening  
CC for anticancer activity or for a bioactive agent capable of modulating  
CC the activity of a CA protein (CAP), methods for detecting cancer  
CC associated with expression of a polypeptide in a test cell sample, a  
CC method for treating cancers and a method for inhibiting the expression of  
CC CA gene in a cell. The composition and methods are useful for detecting,  
CC diagnosing, preventing and treating cancers, especially lymphoma and  
CC leukemia. These may also be used in screening for agents that modulate  
CC cancer. The present sequence is a mouse CAP protein sequence. Note: The  
CC sequence data for this patent did not form part of the printed  
CC specification, but was obtained in electronic format directly from WIPO  
CC at ftp.wipo.int/pub/published\_pct\_sequences  
XX  
SQ Sequence 353 AA;  
  
Query Match 100.0%; Score 185; DB 8; Length 353;  
Best Local Similarity 100.0%; Pred. No. 4.5e-19;  
Matches 34; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
  
QY 1 DVSTSQAVLPDPFPRYPVGKFFQYDTWRQSAAGRL 34  
1 DVSTSQAVLPDPFPRYPVGKFFQYDTWRQSAAGRL 299  
Db  
  
RESULT 5  
ID AAB31482 standard; peptide; 34 AA.  
XX AAB31482;  
AC  
XX  
XX AAB31482;  
DT 20-APR-2001 (first entry)  
XX  
DE Amino acid sequence of rat prepropeptide.  
XX  
XX Bioactive peptide; prepropeptide; pancreatic islet beta-cell;  
XX glucose-mediated insulin secretion; insulin synthesis; type II diabetes;  
XX glucose mediated insulin secretion.  
XX  
XX Rattus sp.  
XX  
XX WO200078805-A1.  
PN  
PN 28-DEC-2000.  
PD  
PF 19-JUN-2000; 2000WO-NZ000102.  
XX  
XX 18-JUN-1999; 99NZ-00336359.  
PR  
XX (COOP/) COOPER G J S.  
PA (BUCH/) BUCHANAN C M.  
XX  
XX Cooper GJS, Buchanan CM;  
PI  
XX MPI; 2001-112313/12.  
DR  
DR N-PSDB; AAF24866.  
XX  
XX New mammalian peptide with prepropeptide functionality, useful for preventing  
XX or treating Type 2 diabetes mellitus by stimulating insulin secretion.  
XX  
XX Claim 4; Page 27; 51pp; English.  
XX  
XX The present sequence represents a rat prepropeptide. The peptide  
XX corresponds to Arg69-Ileu102 of the proIGF-II B peptide. Prepropeptide is  
XX secreted by pancreatic islet beta-cells which enhances glucose-mediated  
XX insulin secretion. Prepropeptides and their analogues are useful in  
XX preparing medicaments for preventing or treating a condition which  
XX results in or involves deficient insulin synthesis, secretion or action  
XX e.g. type II diabetes. Antibodies specific to prepropeptides are useful

CC in an immunological assay such as radioimmunoassay (RIA), IRMA  
 CC (undefined) or Enzyme linked immunosorbent assay (ELISA) for  
 CC quantitatively measuring preptin in a biological fluid preferably in  
 CC cerebrospinal fluid. Agonists or antagonists of preptin peptides are  
 CC useful for modulating glucose mediated insulin secretion

XX Sequence 34 AA;

Query Match 95.7%; Score 177; DB 4; Length 34;

Best Local Similarity 94.1%; Pred. No. 5.3e-19;

Matches 32; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

QY 1 DVSTSQAVLPDPPRPVGVKFFQYDTWRQSAGRL 34

Db 1 DVSTSQAVLPDPPRPVGVKFFQYDTWRQSAGRL 34

RESULT 6 ADM35842

ID ADM35842 standard; peptide; 34 AA.

XX ADM35842;

DT 03-JUN-2004 (first entry)

Rat preptin, SEQ ID NO:2, useful for treating beta-cell disorders.

KM Rat; preptin; pancreatic islet beta-cell; fibroblast; proliferation;  
 KM differentiation; beta-cell disorder; diabetes; insulin resistance;  
 KM insulin resistance; insulin secretion disorder; hyperglycaemia; wound;  
 KM burns; ulcers; mucous membrane disruption;  
 KM peripheral nervous system injury; Alzheimer's disease;  
 KM Parkinson's disease; stroke; amyotrophic lateral sclerosis;  
 KM muscular dystrophy; diabetic neuropathy; myocardial infarction;  
 KM myocardial infarction; cardiac disease; acute renal insufficiency;  
 KM ischaemia; antidiabetic; vulnery; antidiabetic; antiinflammatory;  
 KM gastrointestinal; neurotropic; neuroprotective; antiparkinsonian;  
 KM cerebroprotective; muscular; cardiac; nephrotropic; dermatological;  
 KM protein therapy.

XX Rattus sp.

PN WO2004012761-A1.

XX 12-FEB-2004.

PD 01-AUG-2003; 2003WO-NZ000171.

PF 01-AUG-2002; 2002NZ-00520536.

PR 01-AUG-2002; 2002US-0400445P.

XX (PROT-) PROTEMIX CORP LTD.

PI Cooper GJS, Buchanan CM, James GC;

XX WPI; 2004-157011/15.

PT Use of preptin, preptin analogs, preptin agonists, their salts or  
 PT derivatives, for treating a mediated disease, disorder or condition  
 PT mediated in whole or in part by beta-cells or beta-cell dysfunction, e.g.  
 PT ulcers or inflammation.

XX Claim 2; SEQ ID NO 2; 63pp; English.

XX The invention relates to a method for treating a disorder mediated by  
 CC pancreatic islet beta-cells or beta-cell dysfunction by administering  
 CC preptins (ADM35841-ADM35843), preptin analogues, preptin agonists or  
 CC salts or derivatives thereof. Preptins are able to stimulate the  
 CC proliferation and differentiation of beta-cells and fibroblasts.  
 CC Preptins, preptin analogues, preptin agonists, their salts and  
 CC derivatives are useful in the treatment of internal or external injuries  
 CC or wounds (e.g., burns, ulcers, surgical wounds or mucous membrane  
 CC disruption); conditions characterised by decreased beta-cell mass or

CC number; beta-cell mediated diseases (e.g., type 1 or type 2 diabetes);  
 CC and conditions characterised by insulin resistance, undesirably low  
 CC insulin secretion, hyperglycaemia or post-prandial hyperglycaemia. They  
 CC may also be used for treating and/or preventing peripheral nervous system  
 CC injury; Alzheimer's disease; Parkinson's disease; stroke; amyotrophic  
 CC lateral sclerosis; muscular dystrophy; diabetic neuropathy;  
 CC myocardialopathies such as myocarditis and myocardial infarction; cardiac  
 CC disease and acute attack; and acute renal insufficiency caused by  
 CC ischaemia. They are additionally useful for increasing or maintaining  
 CC beta-cell mass or beta-cell number; for stimulating beta-cell  
 CC proliferation via cell differentiation or neogenesis; for increasing type  
 CC cell mass via cell differentiation or neogenesis; for decreasing cell  
 CC death of motor neurons; for increasing muscular end plates; promoting the  
 CC functional recovery of damaged sciatic nerves; preventing peripheral  
 CC motor paralysis during or as a result of chemotherapy; and for improving  
 CC myocardial function. The present sequence represents rat preptin, which  
 CC is specifically claimed for use in the method of the invention.

XX Sequence 34 AA;

Query Match 95.7%; Score 177; DB 8; Length 34;

Best Local Similarity 94.1%; Pred. No. 5.3e-19;

Matches 32; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

QY 1 DVSTSQAVLPDPPRPVGVKFFQYDTWRQSAGRL 34

Db 1 DVSTSQAVLPDPPRPVGVKFFQYDTWRQSAGRL 34

RESULT 7 ADM96217

ID ADM96217 standard; peptide; 34 AA.

XX ADM96217;

DT 17-JUN-2004 (first entry)

Rat preptin peptide used to treat various bone conditions Seqid 2.

XX osteoblast growth; osteoblast apoptosis; preptin;  
 KM proinsulin-like growth factor II; osteopathic; osteoporosis; osteopenia;  
 KM osteogenesis imperfecta; primary hyperparathyroidism; endocrine disorder;  
 KM corticosteroid treatment; autoimmune arthritis; drug use; rat.

XX Rattus sp.

PN WO2004012760-A1.

PD 12-FEB-2004.

PF 31-JUL-2003; 2003WO-NZ000168.

PR 01-AUG-2002; 2002US-0400443P.

XX (AUCK-) AUCKLAND UNISERVICES LTD.

PI Cornish J, Reid IR, Cooper GJS, Buchanan CM;

XX WPI; 2004-157010/15.

PT Use of preptin, preptin analog or preptin agonist for treating a bone  
 PT condition (e.g. osteoporosis or osteopenia), increasing or maintaining  
 PT bone density, stimulating osteoblast growth, or modulating osteoblast  
 PT apoptosis.

XX Claim 2; SEQ ID NO 2; 29pp; English.

XX This invention relates to a novel method for treating a bone condition.  
 CC Specifically, it refers to increasing or maintaining bone density. The  
 CC stimulating osteoblast growth, or modulating osteoblast apoptosis. The  
 CC present invention comprises administering preptin, a preptin analogue or  
 CC agonist thereof, which corresponds to residues Asp-69 to Leu-102 of the  
 CC proinsulin-like growth factor II that is co-secreted with insulin from

CC pancreatic islet beta cells in response to glucose. Accordingly, such  
 CC compositions that exhibit osteopathic activities can be used to treat or  
 CC ameliorate diseases including osteoporosis, osteopenia, bone defects or  
 CC osteogenesis imperfecta, as well as bone loss resulting from primary  
 CC hyperparathyroidism, endocrine disorders, corticosteroid treatment,  
 CC autoimmune arthritis or addictive drug use. This peptide sequence is the  
 CC rat prepin peptide of the invention.

XX  
 XX  
 SQ Sequence 34 AA;

Query Match 95.7%; Score 177; DB 8; Length 34;  
 Best Local Similarity 94.1%; Pred. No. 5.3e-19;  
 Matches 32; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

QY 1 DVSTSQAVLPDDPPRYPVGKFFQDTWRQSAAGRL 34  
 |||||  
 DB 1 DVSTSQAVLPDDPPRYPVGKFFQDTWRQSAAGRL 34

RESULT 8

ABBS7375  
 ID ABB57375 standard; protein; 180 AA.

XX  
 AC ABB57375;

XX  
 DT 07-AUG-2003 (revised)  
 DT 08-MAR-2002 (first entry)

XX  
 DE Rat mucocardial cell proliferation associated polypeptide SEQ ID NO 2.

XX  
 KM Rat; heart; cardiact; myocardial necrosis; cardiac hypertrophy;  
 KM cardiac insufficiency.

XX  
 OS Rattus norvegicus.

XX  
 PN WO200183705-A1.

XX  
 PD 08-NOV-2001.

XX  
 PF 27-APR-2001; 2001WO-JD003700.

XX  
 PR 27-APR-2000; 2000JP-00126741.

XX  
 PA (KYOW ) KYOWA HAKKO KOGYO KK.

XX  
 PI Yamada Y, Sekine S, Kikuchi Y, Sakurada K;

XX  
 DR WPI; 2002-075160/10.

XX  
 DR N-PSDB; AB199915.

XX  
 PT Genes having differential expression in fetal and adult heart tissue  
 PT useful for screening potential drugs for promoting repair of damage  
 PT caused by myocardial necrosis.

XX  
 PS Claim 53; Page 78-79; 171pp; Japanese.

XX  
 CC The invention relates to gene sequences (AB199915-AB199934) having  
 CC modified expression in fetal heart tissue as compared to adult heart  
 CC tissue and the encoded proteins (ABB57375-ABB57392). The genes have  
 CC cardiant activity and may be useful in the promotion of the repair of  
 CC damage to heart tissue caused by myocardial necrosis. The gene sequences  
 CC are useful for screening potential compounds for the ability to influence  
 CC disease associated with myocardial necrosis. Drugs identified by the  
 CC screening methods may be used to treat and prevent disease with which  
 CC myocardial necrosis is associated, such as cardiac hypertrophy and  
 CC cardiac insufficiency. Diagnosis of diseases such as those above is also  
 CC disclosed. (Updated on 07-AUG-2003 to correct OS field.)

XX  
 SQ Sequence 180 AA;

Query Match 95.7%; Score 177; DB 5; Length 180;  
 Best Local Similarity 94.1%; Pred. No. 3.4e-18;  
 Matches 32; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

QY 1 DVSTSQAVLPDDPPRYPVGKFFQDTWRQSAAGRL 34  
 |||||  
 DB 93 DVSTSQAVLPDDPPRYPVGKFFQDTWRQSAAGRL 126

RESULT 9

ADD46366  
 ID ADD46366 standard; protein; 180 AA.

XX  
 AC ADD46366;

XX  
 DT 29-JAN-2004 (first entry)

XX  
 DE Rat Protein P01346, SEQ ID NO 12045.

XX  
 KM Rat; pain; neuronal tissue; gene therapy; spinal segmental nerve injury;  
 KM chronic constriction injury; CCI; spared nerve injury; SNI; Chung.

XX  
 OS Rattus norvegicus.

XX  
 PN WO2003016475-A2.

XX  
 PD 27-FEB-2003.

XX  
 PF 14-AUG-2002; 2002WO-US025765.

XX  
 PR 14-AUG-2001; 2001US-0312147P.

XX  
 PR 01-NOV-2001; 2001US-0346382P.

XX  
 PR 26-NOV-2001; 2001US-033347P.

XX  
 PA (GENO ) GEN HOSPITAL CORP.

XX  
 PA (FARB ) BAYER AG.

XX  
 PI Woolf C, D'urso D, Befort K, Costigan M;

XX  
 DR WPI; 2003-268312/26.

XX  
 DR GENBANK; P01346.

XX  
 PS Claim 1; Page; 1017pp; English.

XX  
 CC The invention discloses a composition comprising two or more isolated rat  
 CC or human polynucleotides or a polynucleotide which represents a fragment,  
 CC derivative or allelic variation of the nucleic acid sequence. Also  
 CC claimed are a vector comprising the novel polynucleotide, a host cell  
 CC comprising the vector, a method for identifying a nucleotide sequence  
 CC which is differentially regulated in an animal subjected to pain and a  
 CC kit to perform the method, an array, a method for identifying an agent  
 CC that increases or decreases the expression of the polynucleotide sequence  
 CC that is differentially expressed in neuronal tissue of a first animal  
 CC subjected to pain, a method for identifying a compound which regulates  
 CC the expression of a polynucleotide sequence which is differentially  
 CC expressed in an animal subjected to pain, a method for identifying a  
 CC compound that regulates the activity of one or more of the  
 CC polynucleotides, a method for producing a pharmaceutical composition, a  
 CC method for identifying a compound or small molecule that regulates the  
 CC activity in an animal of one or more of the polypeptides given in the  
 CC specification, a method for identifying a compound useful in treating  
 CC pain and a pharmaceutical composition comprising the one or more  
 CC polypeptides or their antibodies. The polynucleotide or the compound that  
 CC modulates its activity is useful for preparing a medicament for treating  
 CC pain (e.g. spinal segmental nerve injury (SNI), chronic constriction  
 CC injury (CCI) and spared nerve injury (SNI)) in an animal (e.g. gene  
 CC therapy). The sequence presented is a rat protein (shown in Table 2 of  
 CC the specification) which is differentially expressed during pain. Note:  
 CC The sequence data for this patent did not form part of the printed  
 CC specification, but was obtained in electronic form directly from WIPO at  
 CC ftp://ipo.int/pub/published\_pct\_sequences.

XX  
 SQ Sequence 180 AA;

Query Match	95.7%;	Score 177;	DB 7;	Length 180;
Best Local Similarity	94.1%;	Pred. No. 3,4e-18;		
Matches	32;	Conservative	2;	Mismatches 0; Indels 0; Gaps 0;
Oy	1 DVSTSQAVLPDDFPFPRYPVGKFFFOYDTWQSA	GRL 34		
Dd	93 DVSTSQAVLPDDFPFPRYPVGKFFFOYDTWQSA	GRL 126		
<hr/>				
RESULT 10				
ID	AAB31481	standard; peptide; 34 AA.		
XX	AAB31481,			
AC				
XX				
XX	20-APR-2001 (first entry)			
DT				
DE				
XX	Amino acid sequence of human preproinsulin precursor.			
KM	Bioactive peptide; preproinsulin, pancreatic islet beta-cell;			
KW	glucose-mediated insulin secretion; insulin synthesis; type II diabetes;			
RN	glucose mediated insulin secretion.			
XX				
OS	Homo sapiens.			
XX				
PN	WO200078805-A1.			
PD				
XX	28-DEC-2000.			
PF	19-JUN-2000; 2000MO-NZ000102.			
PR	18-JUN-1999; 99NZ-00336359.			
XX				
PA	(COOP/) COOPER G J S.			
PA	(BUCH/) BUCHANAN C M.			
XX				
PI	Cooper GJS, Buchanan CM;			
XX				
DR	WPI, 2001-112313/12.			
DR	N-Psdb; AAF24865.			
XX				
PT	New mammalian peptide with preproinsulin functionality, useful for preventing or treating Type 2 diabetes mellitus by stimulating insulin secretion.			
XX				
PS	Claim 3, Page 27; 51pp; English.			
CC	The present sequence represents a human preproinsulin peptide. The peptide corresponds to Arg69-Leu102 of the proIGF-II E peptide. Preproinsulin is secreted by pancreatic islet beta-cells which enhances glucose-mediated insulin secretion. Preproinsulin peptides and their analogues are useful in preparing medicaments for preventing or treating a condition which results in or involves deficient insulin synthesis, secretion or action e.g. type II diabetes. Antibodies specific to preproinsulin peptides are useful in an immunological assay such as radioimmunoassay (RIA), IRMA (undefined) or Enzyme linked immunosorbent assay (ELISA) for quantitatively measuring preproinsulin in a biological fluid preferably in cerebrospinal fluid. Agonists or antagonists of preproinsulin peptides are useful for modulating glucose mediated insulin secretion			
CC				
CC				
XX				
SQ	Sequence 34 AA;			
<hr/>				
Query Match	81.1%;	Score 150;	DB 4;	Length 34;
Best Local Similarity	79.4%;	Pred. No. 6,4e-15;		
Matches	27;	Conservative	2;	Mismatches 5; Indels 0; Gaps 0;
Oy	1 DVSTSQAVLPDDFPFPRYPVGKFFFOYDTWQSA	GRL 34		
Dd	1 DVSTPEPTVLPDDFPFPRYPVGKFFFOYDTWQSA	GRL 34		
<hr/>				
RESULT 11				
ADM35841				

ID	ADM35841 standard; peptide; 34 AA.
XX	
AC	ADM35841;
XX	
DT	03-JUN-2004 (first entry)
DE	Human preptin, SEQ ID NO:1, useful for treating beta-cell disorders.
XX	
XX	Human; preptin; pancreatic islet beta-cell; fibroblast; proliferation;
KW	differentiation; beta-cell disorder; diabetes; insulin resistance;
KW	insulin resistance; insulin secretion disorder; hyperglycaemia; wound;
KW	burns; ulcer; mucous membrane disruption;
KW	peripheral nervous system injury; Alzheimer's disease;
KW	Parkinson's disease; stroke; amyotrophic lateral sclerosis;
KW	muscular dystrophy; diabetic neuropathy; myocardopathy; myocarditis;
KW	myocardial infarction; cardiac disease; acute renal insufficiency;
KW	ischaemia; antidiabetic; valvular disease; antitumor; antiinflammatory;
KW	gastrointestinal; nootropic; neuroprotective; antiparkinsonian;
KW	cerebroprotective; muscular; cardiac; nephrotropic; dermatological;
KW	protein therapy.
XX	
OS	Homo sapiens.
XX	
PN	WO2004012761-A1.
XX	
PD	12-FEB-2004.
XX	
PF	01-AUG-2003; 2003WO-NZ000171.
XX	
PR	01-AUG-2002; 2002NZ-00520536.
PR	01-AUG-2002; 2002US-0400445P.
XX	
PA	(PROT-) PROTEMIX CORP LTD.
XX	
PI	Cooper GJS, Buchanan CM, James GC;
XX	
DR	WPI, 2004-157011/15.
XX	
PT	Use of preptins, preptin analogs, preptin agonists, their salts or
PT	derivatives, for treating a mediated disease, disorder or condition
PT	mediated in whole or in part by beta-cells or beta-cell dysfunction, e.g.
PT	ulcers or inflammation.
XX	
PS	Claim 2; SEQ ID NO 1; 63pp; English.
XX	
CC	The invention relates to a method for treating a disorder mediated by
CC	pancreatic islet beta-cells or beta-cell dysfunction by administering
CC	preptins (ADM35841-ADM35843), preptin analogues, preptin agonists or
CC	salts or derivatives thereof. Preptins are able to stimulate the
CC	proliferation and differentiation of beta-cells and fibroblasts.
CC	Preptins, preptin analogues, preptin agonists, their salts and
CC	derivatives are useful in the treatment of internal or external injuries
CC	or wounds (e.g., burns, ulcers, surgical wounds or mucous membrane
CC	disruption); conditions characterised by decreased beta-cell mass or
CC	number; beta-cell mediated diseases (e.g., type 1 or type 2 diabetes);
CC	and conditions characterised by insulin resistance, undesirably low
CC	insulin secretion, hyperglycaemia or post-prandial hyperglycaemia. They
CC	may also be used for treating and/or preventing peripheral nervous system
CC	injury; Alzheimer's disease; Parkinson's disease; stroke; amyotrophic
CC	lateral sclerosis; muscular dystrophy; diabetic neuropathy;
CC	myocardopathies such as myocarditis and myocardial infarction; cardiac
CC	disease and acute attack; and acute renal insufficiency caused by
CC	ischaemia. They are additionally useful for increasing or maintaining
CC	beta-cell mass or beta-cell number; for stimulating beta-cell
CC	proliferation via cell differentiation or neogenesis; for increasing type
CC	-cell mass via cell differentiation or neogenesis; for decreasing cell
CC	death of motor neurons; for increasing muscular end plates; promoting the
CC	functional recovery of damaged sciatic nerves; preventing peripheral
CC	motor paralysis during or as a result of chemotherapy; and for improving
CC	myocardial function. The present sequence represents human preptin, which
CC	is specifically claimed for use in the method of the invention.
XX	
XX	Sequence 34 AA;



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DT 29-DEC-2005 (first entry)
XX Human insulin growth factor 2 (IGF2) polypeptide.
XX Insulin growth factor 2; IGF2; cell growth; cell differentiation.
XX Homo sapiens.
XX IN900401-14.
XX 04-MAR-2005.
XX 07-APR-1999; 99IN-CH000401.
XX 07-APR-1999; 99IN-CH000401.
XX (ZYMO ) ZYMOGENETICS INC.
XX Conklin DC, Lofton-Day CE, Lok SI, Jaspers SR;
XX WPI; 2005-557657/57.
XX Insulin homologs.
XX Disclosure; Fig 1; 78pp; English.
XX The invention relates to polynucleotide and polypeptide sequences for a
XX novel insulin homolog referred to as Zins3. The polynucleotide sequences
XX encoding the Zins3 polypeptides are located on chromosome 12. The present
XX invention also includes antibodies to the Zins3 polypeptides. The Zins3
XX polynucleotide and polypeptide sequences of the invention are useful for
XX identifying and isolating receptors involved in growth and
XX differentiation of Zins3 responsive cells. This sequence represents human
XX insulin growth factor 2 (IGF2) that shows homology to human Zins3.
XX
XX SQ Sequence 155 AA;
XX
XX Query Match 81.1%; Score 150; DB 9; Length 155;
XX Best Local Similarity 79.4%; Pred. No. 3.4e-14;
XX Matches 27; Conservative 2; Mismatches 5; Indels 0; Gaps 0;
XX
XX QY 1 DVSTSQAVLPDDFPRYPVGKFFQYDTWRQSGRL 34
XX |||||:|||||:|||||:|||||:|||||:
XX 93 DVSTPPTVLPDNPFRYPVGKFFQYDTWRQSGRL 126
XX
XX RESULT 15
XX ADV90292
XX ID ADV90292 standard; protein; 156 AA.
XX
XX AC ADV90292;
XX
XX DT 10-MAR-2005 (first entry)
XX
XX DE Protease-hydrolysed polypeptide #69.
XX
XX Protease; immune disorder; inflammation; musculoskeletal disease;
XX dermatological disease; gastrointestinal disease; endocrine disease;
XX metabolic disorder; cancer; hematological disease;
XX cardiovascular disease; neurological disease; neurodegenerative disease;
XX growth disorder; respiratory disease; genitourinary disease;
XX gynecological disorder; nutritional disorder; infection; cytostatic;
XX gastrointestinal-gen.; antiinflammatory; antiaesthetic; analgesic;
XX antidiabetic; osteopathic; antidiabetic; nephrotropic;
XX cardiovascular-gen.; immunosuppressive; respiratory-gen.; antipsoriatic;
XX antiallergic; dermatological; enzyme; hydrolysis.
XX
XX OS Homo sapiens.
XX
XX PN WO2004113522-A1.
XX
XX PD 29-DEC-2004.
XX

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PF 18-JUN-2004; 2004WO-BF051173.
XX
XX 18-JUN-2003; 2003EP-00013819.
XX 10-NOV-2003; 2003EP-00025851.
XX 11-NOV-2003; 2003EP-00025871.
XX 11-FEB-2004; 2004EP-00003058.
XX (DIRE-) DIREVO BIOTECH AG.
XX
XX Haupts U, Koltermann A, Scheidig A, Voetemeier C, Ketting U;
XX WPI; 2005-057985/06.
XX
XX PT Proteases with defined specificity for a target substrate useful for
XX treating a specific disease related to the target substrate, such as
XX cancer, asthma, diabetes, inflammatory disorders and psoriasis.
XX
XX Claim 30; SEQ ID NO 122; 250pp; English.
XX
XX The invention relates to the use of a protease with defined specificity
XX for a target substrate for preparing a medicament for the treatment of a
XX specific disease related to the target substrate. The invention also
XX relates to a pharmaceutical or diagnostic composition comprising one or
XX more enzymes in the use cited, optionally comprising pharmaceutically or
XX diagnostically acceptable carriers, excipients and/or auxiliary agents, a
XX method for cleaving a target substrate in vivo or in vitro comprising
XX contacting the target substrate with a protease as cited in the use
XX mentioned, and a method for treatment of a disease in a patient connected
XX with a specific target substrate comprising administering to the patient
XX a protease with defined specificity for the specific target substrate.
XX The protease hydrolyses the target substrate and eliminates or reduces
XX one or more biological activities, physico-chemical properties or
XX pharmacological properties of the target protein and/or activates or
XX increases one or more biological activities, physico-chemical properties
XX or pharmacological properties of the target protein, and/or adds one or
XX more biological activities, physico-chemical properties or
XX pharmacological properties to the target protein. The protease may be
XX administered to treat immune disorders, inflammatory disorders,
XX musculoskeletal diseases, dermatological diseases, gastrointestinal
XX diseases, endocrine diseases, metabolic disorder, cancers, hematological
XX diseases, cardiovascular diseases, neurological diseases,
XX neurodegenerative diseases, growth disorders, respiratory diseases,
XX genitourinary diseases, gynecological disorders, nutritional disorders
XX and infections. This sequence represents a polypeptide hydrolysed by a
XX protease used in the scope of the invention.
XX
XX SQ Sequence 156 AA;
XX
XX Query Match 81.1%; Score 150; DB 9; Length 156;
XX Best Local Similarity 79.4%; Pred. No. 3.5e-14;
XX Matches 27; Conservative 2; Mismatches 5; Indels 0; Gaps 0;
XX
XX QY 1 DVSTSQAVLPDDFPRYPVGKFFQYDTWRQSGRL 34
XX |||||:|||||:|||||:|||||:|||||:
XX 69 DVSTPPTVLPDNPFRYPVGKFFQYDTWRQSGRL 102
XX
XX Search completed: May 21, 2006, 12:37:33
XX Job time : 121.333 secs
XX

```



GenCore version 5.1.8  
Copyright (c) 1993 - 2006 Bioacceleration Ltd.

OM protein - protein search, using sw model

Run on: May 21, 2006, 12:37:56 ; Search time 19.6667 Seconds

(without alignments)  
166.341 Million cell updates/sec

Title: US-10-632-366-3

Perfect score: 185

Sequence: 1 DVSTSQAVLPDDFPRYPVGKFPQYDTMROSAGRL 34

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 283416 seqs, 96216763 residues

Total number of hits satisfying chosen parameters: 283416

Minimum DB seq length: 0

Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : PIR 80:\*

1: pirl:\*

2: pirl:\*

3: pirl:\*

4: pirl:\*

#### SUMMARIES

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

Result No.	Score	Query Match	Length	ID	Description
1	185	100.0	180	2	A24913
2	177	95.7	180	1	IGRT2
3	156	84.3	180	2	I57671
4	150	81.1	180	1	IGHU2
5	150	81.1	181	2	B60738
6	150	81.1	183	2	I67610
7	150	81.1	183	2	S02423
8	132	71.4	179	2	S04858
9	128	69.2	155	1	IGBO2
10	99	53.5	93	2	I53642
11	53	28.6	206	2	T46194
12	51.5	27.8	197	1	YTBST
13	51	27.6	631	2	T00958
14	50.5	27.3	1012	2	T31352
15	50.5	27.3	2109	2	AG1345
16	50	27.0	205	2	T15717
17	50	27.0	393	2	AC0732
18	50	27.0	503	2	AG0624
19	50	27.0	627	2	S56868
20	50	27.0	637	2	S56868
21	49.5	26.8	575	2	G86231
22	49.5	26.8	793	2	H82594
23	49.5	26.8	793	2	G75140
24	49	26.5	298	2	S66977
25	49	26.5	613	2	S67605
26	49	26.5	638	2	T13800
27	49	26.5	1698	2	G86178
28	48.5	26.2	437	2	A38874
29	48.5	26.2	473	1	A38874

30	48.5	26.2	579	2	T01160	hypothetical prote
31	48.5	26.2	1037	2	D96786	protein F10A5.15 f
32	48.5	26.2	1031	2	S42509	Rag1-protein - ch
33	48.5	26.2	1230	2	S53974	hypothetical prote
34	48.5	26.2	132	2	S36196	hypothetical prote
35	48.5	25.9	398	2	F86640	multidrug resistanc
36	48.5	25.9	404	2	T37762	queuine trna-ribos
37	48.5	25.9	459	2	I38013	p54/58N - human
38	48.5	25.9	481	2	H96529	hypothetical prote
39	48.5	25.9	556	2	F64405	methyl coenzyme M
40	48.5	25.9	864	2	UC4624	alpha-glucosidase
41	48.5	25.9	896	2	S26984	probable DNA-direc
42	47.5	25.7	214	2	B46244	insulin-like growt
43	47.5	25.7	398	2	C84780	hypothetical prote
44	47.5	25.7	408	2	T50876	hypothetical membr
45	47.5	25.7	465	2	D64881	ycjX protein - Bsc

#### ALIGNMENTS

RESULT 1

A24913

insulin-like growth factor II precursor - mouse

C:Species: Mus musculus (house mouse)

C>Date: 07-Mar-1988 #sequence\_revision 07-Mar-1988 #text\_change 09-Jul-2004

C:Accession: A24913; S35874; I48463; I48464; I59137; S35875

R:Stempien, M.M.; Fong, N.M.; Rall, L.B.; Bell, G.I.

DNA 5, 357-361, 1986

A:Title: Sequence of a placental cDNA encoding the mouse insulin-like growth factor II

A:Reference number: A24913; PMID:87053171; PMID:3780370

A:Accession: A24913

A:Molecule type: mRNA

A:Residues: 1-180 <STE>

A:Cross-references: UNIPROT:P09535; UNIPARC:UPI000020A45; GB:M1951; GB:J04069; GB:M20

A:Status: preliminary

A:Molecule type: DNA

A:Residues: 1-52 <H02>

A:Cross-references: UNIPARC:UPI000011613C; EMBL:X71921; NID:G393422; PIDN:CAA50737.1; P

A:Status: preliminary; translated from GB/EMBL/DBD

A:Molecule type: DNA

A:Residues: 1-52 <RES>

A:Cross-references: UNIPARC:UPI000011613C; EMBL:X71921; NID:G393422; PIDN:CAA50737.1; P

A:Accession: I48463

A:Status: preliminary; translated from GB/EMBL/DBD

A:Molecule type: DNA

A:Residues: 1-52 <RES>

A:Cross-references: UNIPARC:UPI000011613C; EMBL:X71922; NID:G393424; PIDN:CAA50738.1; P

R:Tollisen, S.E.; Sadow, J.L.; Rotstein, P.

Proc. Natl. Acad. Sci. U.S.A. 86, 1543-1547, 1989

A:Title: Coordinate expression of insulin-like growth factor II and its receptor during

A:Reference number: I59137; PMID:89160812; PMID:2537977

A:Accession: I59137

A:Status: preliminary; translated from GB/EMBL/DBD

A:Molecule type: DNA

A:Residues: 1-52 <RES>

A:Cross-references: UNIPARC:UPI000011613C; GB:M24633; NID:G341211; PIDN:AAA37923.1; PID

C:Gene: IGF-2

C:Superfamily: Insulin

C:Keywords: growth factor

Query Match 100.0%; Score 185; DB 2; Length 180;

Best Local Similarity 100.0%; Pred. No. 2.6e-19;

Matches 34; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 DVSTSQAVLPDDFPRYPVGKFPQYDTMROSAGRL 34



## RESULT 4

IGH2  
Insulin-like growth factor II precursor [validated] - human  
N/Alternate names: somatomedin A  
C/Species: Homo sapiens (man)  
C/Date: 24-Apr-1984 #sequence revision 15-Nov-1984 #text change 09-Jul-2004  
C/Accession: B23614; A93339; X28300; A30155; I56957; A93338; A91448; B60483; A33845; A61  
R/de Pöster-Holthuisen, P.; van Schaik, F.M.A.; Verdulijn, G.M.; van Ommen, G.J.B.; Bouma  
FEBS Lett. 195, 179-184, 1986  
A/Title: Organization of the human genes for insulin-like growth factors I and II.  
A/Reference number: A91356; MUID:86108862; PMID:3002851  
A/Accession: B23614  
A/Molecule type: DNA  
A/Residues: 1-180 <DEP>  
A/Cross-references: UNIPROT:P01344; UNIPARC:UPI0000000965  
R/Dull, T.J.; Gray, A.; Hayflick, J.S.; Ullrich, A.  
Nature 310, 777-781, 1984  
A/Title: Insulin-like growth factor II precursor gene organization in relation to insulin  
A/Reference number: A93339; MUID:84295593; PMID:6382022  
A/Accession: A93339  
A/Molecule type: DNA  
A/Residues: 1-180 <DUJ>  
A/Cross-references: UNIPARC:UPI0000000965; GB:M14118; NID:g183094; PIDN:AAA52535.1; PID:  
R/Iminger, J.C.; Rosen, K.M.; Humbel, R.E.; Villa-Komaroff, L.  
Proc. Natl. Acad. Sci. U.S.A. 84, 6330-6334, 1987  
A/Title: Tissue-specific expression of insulin-like growth factor II mRNAs with distinct  
A/Accession number: A28300; MUID:87317645; PMID:3476948  
A/Reference number: A28300  
A/Molecule type: mRNA  
A/Residues: 1-180 <IRM>  
A/Cross-references: UNIPARC:UPI0000000965; GB:M17426; NID:g189954; PIDN:AAA60088.1; PID:  
R/Shen, S.-J.; Daimon, M.; Wang, C.Y.; Jansen, M.; Ilan, J.  
Proc. Natl. Acad. Sci. U.S.A. 85, 1947-1951, 1988  
A/Title: Isolation of an insulin-like growth factor II cDNA with a unique 5' untranslated  
A/Reference number: A30155; MUID:88188110; PMID:2450353  
A/Accession: A30155  
A/Molecule type: mRNA  
A/Residues: 1-180 <SHE>  
A/Cross-references: UNIPARC:UPI0000000965; GB:U03242; NID:g183123; PIDN:AAA52545.1; PID:  
R/Hagiwara, K.; Kobayashi, T.; Tobita, M.; Kikyo, N.; Yazaki, Y.; Okabe, T.  
Jpn. J. Cancer Res. 86, 202-207, 1995  
A/Title: Isolation of a cDNA for a growth factor of vascular endothelial cells from huma  
A/Reference number: I56957; MUID:95247546; PMID:7730145  
A/Accession: I56957  
A/Status: translated from GB/EMBL/DBJ  
A/Molecule type: mRNA  
A/Residues: 1-180 <HAG>  
A/Cross-references: UNIPARC:UPI0000000965; GB:S77035; NID:g914191; PIDN:AAA34155.1; PID:  
A/Experimental source: Lung cancer cell line T3M-11  
R/Bell, G.I.; Merryweather, J.P.; Sanchez-Pescador, R.; Stempien, M.M.; Priestley, L.; S  
Nature 310, 775-777, 1984  
A/Title: Sequence of a cDNA clone encoding human preproinsulin-like growth factor II.  
A/Reference number: A93338; MUID:84255592; PMID:6382021  
A/Accession: A93338  
A/Molecule type: mRNA  
A/Residues: 1-180 <BEL>  
A/Cross-references: UNIPARC:UPI0000000965; GB:X00910; GB:M17862; NID:g32995; PIDN:CAA254  
R/Rinderknecht, E.; Humbel, R.E.  
FEBS Lett. 89, 283-286, 1978  
A/Title: Primary structure of human insulin-like growth factor II.  
A/Reference number: A91448; MUID:78191259; PMID:658418  
A/Accession: A91448  
A/Molecule type: protein  
A/Residues: 25-91 <RIN>  
A/Cross-references: UNIPARC:UPI000002CB81  
R/Karay, K.P.; Marguaret, H.; Siraaku, D.A.  
Blood 74, 1084-1092, 1989  
A/Title: Human platelet-derived mitogens. Identification of insulinlike growth factors I  
A/Reference number: A60483; MUID:89323462; PMID:2752153  
A/Accession: B60483  
A/Molecule type: protein

A/Residues: 25-32, 'X', 34-44 <KAR>  
A/Cross-references: UNIPARC:UPI000017358A  
A/Experimental source: Platelet lysate  
R/Smith, M.C.; Cook, J.A.; Furman, T.C.; Occolowicz, J.L.  
J. Biol. Chem. 264, 9314-9321, 1989  
A/Title: Structure and activity dependence of recombinant human insulin-like growth fac  
A/Reference number: A33845; MUID:69255428; PMID:2728286  
A/Accession: A33845  
A/Molecule type: protein  
A/Residues: 25-91 <SMI>  
A/Cross-references: UNIPARC:UPI000002CB81  
R/Mohan, S.  
Growth Factors 2, 267-271, 1990  
A/Title: A simple and efficient scheme for the purification of insulin-like growth fact  
A/Reference number: A61037; MUID:90246152; PMID:2337472  
A/Accession: A61037  
A/Molecule type: protein  
A/Residues: 25-32 <MOH>  
A/Cross-references: UNIPARC:UPI000017358B  
A/Note: this protein was purified from bone, where it comprises 0.1 % of total protein  
R/Jansen, M.; van Schaik, F.M.; van Tol, H.; van den Brande, J.L.; Sussenbach, J.S.  
FEBS Lett. 179, 243-246, 1985  
A/Title: Nucleotide sequences of cDNAs encoding precursors of human insulin-like growth  
A/Reference number: I53458; MUID:85102019; PMID:3881277  
A/Accession: I53458  
A/Status: translated from GB/EMBL/DBJ  
A/Molecule type: mRNA  
A/Residues: 1-180 <RES>  
A/Cross-references: UNIPARC:UPI0000000965; GB:M17862; NID:g32995; PIDN:CAA25426.1; PID:  
A/Note: an alternatively spliced form was also found, in which 53-Ser is replaced by Ar  
R/Rall, L.B.; Scott, J.; Bell, G.I.  
Meth. Enzymol. 146, 239-248, 1987  
A/Title: Human insulin-like growth factor I and II messenger RNA: isolation of compleme  
A/Reference number: I57044; MUID:88065102; PMID:3683205  
A/Accession: I57044  
A/Status: preliminary; translated from GB/EMBL/DBJ  
A/Molecule type: mRNA  
A/Residues: 1-2, 'W', 4-180 <RE3>  
A/Cross-references: UNIPARC:UPI000016A990; GB:M29645; NID:g183121; PIDN:AAA52544.1; PID:  
R/Gray, A.; Tam, A.W.; Dull, T.J.; Hayflick, J.; Pintar, J.; Cavenee, W.K.; Koufos, A.;  
DNA 6, 283-295, 1987  
A/Title: Tissue-specific and developmentally regulated transcription of the insulin-lik  
A/Reference number: I52978; MUID:88003966; PMID:3652904  
A/Accession: I52978  
A/Status: translated from GB/EMBL/DBJ  
A/Molecule type: DNA  
A/Residues: 1-52 <RE2>  
A/Cross-references: UNIPARC:UPI000016A98B; GB:M22373; NID:g183100; PIDN:AAA52536.1; PID:  
C/Genetics  
A/Gene: GDB:IGF2  
A/Cross-references: GDB:119331; OMIM:147470  
A/Map position: 11p15.5-11p15.5  
C/Superfamily: insulin  
C/Keywords: alternative splicing; angiogenesis; growth factor; monomer  
F:1-24/Domain: signal sequence #status predicted <SIG>  
F:25-91/Product: insulin-like growth factor II #status experimental <NAT>  
F:92-180/Domain: carboxyl-terminal propeptide (E peptide) #status predicted <CTP>  
F:33-71, 45-84, 70-75/Disulfide bonds: #status experimental

Query Match 81.1%; Score 150; DB 1; Length 180;  
Best Local Similarity 79.4%; Pred. No. 3; le-14;  
Matches 27; Conservative 2; Mismatches 5; Indels 0; Gaps 0;

QY 1 DVSTQAVLPDDPFRYPVGVKFPQYDTWRQAGRL 34  
Db 93 DVSTPPTVLPDNPFRYPVGVKFPQYDTWRQAGRL 126

RESULT 5  
B60738  
Insulin-like growth factor II precursor - pig  
C/Species: Sus scrofa domestica (domestic pig)  
C/Date: 1993 #sequence revision 30-Sep-1993 #text change 13-Nov-1998

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C/Accession: S12614, B60738
R/Catchpole, I.R.; Engstrom, W.
Nucleic Acids Res. 18, 6430, 1990
A/Title: Nucleotide sequence of a porcine insulin-like growth factor II cDNA.
A/Reference number: S12614; MUID:91057136; PMID:2243790
A/Accession: S12614
A/Molecule type: mRNA
A/Residues: 1-181 <CAT>
A/Cross-references: UNIPARC:UPI0000176673
R/Francis, G.L.; Owens, P.C.; McNeill, K.A.; Wallace, J.C.; Ballard, F.J.
J. Endocrinol. 122, 681-687, 1989
A/Title: Purification, amino acid sequences and assay cross-reactivities of porcine insulin
A/Reference number: A60738; MUID:90039035; PMID:2809477
A/Accession: B60738
A/Molecule type: protein
A/Residues: 25-79, 'X', 81-91 <FRA>
A/Cross-references: UNIPARC:UPI0000176674
C/Superfamily: insulin
F/1-24/Domain: signal sequence #status predicted <SIG>
F/25-91/Product: insulin-like growth factor II #status experimental <MAT>
F/92-181/Domain: carboxyl-terminal propeptide (E peptide) #status predicted <CTP>
F/33-71,45-84,70-75/Disulfide bonds: #status predicted

Query Match      81.1%; Score 150; DB 2; Length 181;
Best Local Similarity 79.4%; Pred. No. 3,1e-14;
Matches 27; Conservative 3; Mismatches 4; Indels 0; Gaps 0;

QY      1 DVSTSQAVLPDDPPRYVVGKFFQYDTWRQSGRL 34
Db      93 DVSTPPTVLPDNPFRYPVVGKFFQYDTWRQSGRL 126

RESULT 6
Insulin-like growth factor II, domains A-E - human
C/Species: Homo sapiens (man)
C/Date: 04-Oct-1996 #sequence, revision 04-Oct-1996 #text_change 16-Jul-1999
C/Accession: I67610
R/Jensen, M.; van Schaik, F.M.; van Tol, H.; van den Brande, J.L.; Sussenbach, J.S.
FEBS Lett. 179, 243-246, 1985
A/Title: Nucleotide sequences of cDNAs encoding precursors of human insulin-like growth
A/Reference number: I53458; MUID:85102019; PMID:3881277
A/Accession: I67610
A/Status: preliminary; translated from GB/EMBL/DBJ
A/Molecule type: mRNA
A/Residues: 1-183 <RES>
A/Cross-references: UNIPARC:UPI000016A8E9; GB:ML7863; NID:g182527; PIDN:AAA52443.1; PID:
C/Gene: GDB:IGF2
A/Accession: GDB:IGF2
A/Cross-references: GDB:119331; OMIM:147470
A/Map position: 11p15.5-11p15.5
C/Superfamily: insulin

Query Match      81.1%; Score 150; DB 2; Length 183;
Best Local Similarity 79.4%; Pred. No. 3,1e-14;
Matches 27; Conservative 2; Mismatches 5; Indels 0; Gaps 0;

QY      1 DVSTSQAVLPDDPPRYVVGKFFQYDTWRQSGRL 34
Db      96 DVSTPPTVLPDNPFRYPVVGKFFQYDTWRQSGRL 129

RESULT 7
Insulin-like growth factor II precursor, splice form II - human
C/Species: Homo sapiens (man)
C/Date: 28-Feb-1990 #sequence, revision 28-Feb-1990 #text_change 09-Jul-2004
C/Accession: S02423; S03383; A34439
R/le Bouc, Y.; Noguiez, P.; Sondermeijer, P.; Dreyer, D.; Girard, F.; Binoux, M.
FEBS Lett. 222, 181-185, 1987
A/Title: A new 5'-non-coding region for human placental insulin-like growth factor II mRNA
A/Reference number: S02423; MUID:88005137; PMID:3653397

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A/Accession: S02423
A/Status: not compared with conceptual translation
A/Molecule type: mRNA
A/Residues: 1-183 <LEI>
A/Cross-references: UNIPROT:P01344; UNIPARC:UPI000002ABE8; EMBL:Y00693
A/Note: 53-Ser was also found instead of residues 53-56 (Arg-Leu-Pro-Gly)
R/de Pagter-Holhuizen, P.; Jansen, M.; van der Kammen, R.A.; van Schaik, F.M.A.; Sussenbach, J.
Biochim. Biophys. Acta 950, 282-295, 1988
A/Title: Differential expression of the human insulin-like growth factor II gene. Characterization
A/Reference number: S03383; MUID:89000779; PMID:3167054
A/Accession: S03383
A/Status: translation not shown
A/Molecule type: DNA
A/Residues: 106-183 <DEP>
A/Cross-references: UNIPARC:UPI000016AAE7; EMBL:X07868; NID:g32998; PIDN:CAA30717.1; PID:
R/Hampton, B.; Burgess, W.H.; Marshak, D.R.; Cullen, K.O.; Perdue, J.F.
J. Biol. Chem. 264, 19155-19160, 1989
A/Title: Purification and characterization of an insulin-like growth factor II variant
A/Reference number: A34439; MUID:90037048; PMID:2553732
A/Accession: A34439
A/Molecule type: protein
A/Residues: 25-32, 'X', 34-44, 'X', 46-59 <HAM>
A/Cross-references: UNIPARC:UPI0000176678
C/Gene: GDB:IGF2
A/Accession: GDB:IGF2
A/Cross-references: GDB:119331; OMIM:147470
A/Map position: 11p15.5-11p15.5
C/Superfamily: insulin
C/Keywords: growth factor
F/1-24/Domain: signal sequence #status predicted <SIG>
F/25-94/Product: insulin-like growth factor II #status predicted <MAT>
F/25-59/Domain: insulin chain B-like #status predicted <DOB>
F/60-67/Domain: insulin connecting C peptide-like #status predicted <CEP>
F/68-88/Domain: insulin chain A-like #status predicted <DOA>
F/89-94/Domain: D peptide #status predicted <DOD>
F/95-183/Domain: carboxyl-terminal propeptide (E peptide) #status predicted <CTP>
F/33-74,45-87,73-78/Disulfide bonds: #status predicted

Query Match      81.1%; Score 150; DB 2; Length 183;
Best Local Similarity 79.4%; Pred. No. 3,1e-14;
Matches 27; Conservative 2; Mismatches 5; Indels 0; Gaps 0;

QY      1 DVSTSQAVLPDDPPRYVVGKFFQYDTWRQSGRL 34
Db      96 DVSTPPTVLPDNPFRYPVVGKFFQYDTWRQSGRL 129

RESULT 8
Insulin-like growth factor II precursor - sheep
C/Species: Ovis orientalis aries (domestic sheep)
C/Date: 07-Jun-1990 #sequence, revision 07-Jun-1990 #text_change 09-Jul-2004
C/Accession: S04858; S10984; S20731; S04972; S32557; S32558; A61008; S08567
R/O'Mahoney, J.V.; Adams, T.E.
Nucleic Acids Res. 17, 5397, 1989
A/Title: Nucleotide sequence of an ovine insulin-like growth factor-II cDNA.
A/Reference number: S04858; MUID:89345107; PMID:2762134
A/Accession: S04858
A/Molecule type: mRNA
A/Residues: 1-179 <OMA>
A/Cross-references: UNIPROT:P10764; UNIPARC:UPI000012D40F; EMBL:X15248; NID:g1802; PIDN:
R/Brown, W.M.; Dziegielewska, K.M.; Foreman, R.C.; Saunders, N.R.
Nucleic Acids Res. 18, 4614, 1990
A/Title: The nucleotide and deduced amino acid sequences of insulin-like growth factor
A/Reference number: S10983; MUID:90356421; PMID:2388846
A/Accession: S10984
A/Molecule type: mRNA
A/Residues: 1-179 <BRO>
A/Cross-references: UNIPARC:UPI000012D40F; EMBL:X33554; NID:g1262; PIDN:CAA37621.1; PID:
R/Ohlsson, S.M.; Wong, E.A.
Submitted to the EMBL Data Library, September 1990
A/Reference number: S20731
A/Accession: S20731

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C>Date: 12-Feb-1999 #sequence\_revision 12-Feb-1999 #text\_change 09-Jul-2004

C/Accession: T00958

R/Vyotskaya, V.S.; Osborne, B.I.; Schwartz, J.R.; Toriumi, M.; Kwan, A.; Yu, G.; Oji, C.  
K.; Feng, J.; Kim, C.; Kutz, D.; Li, Y.; Palm, C.J.; Shinn, P.; Sun, H.; Davis, R.W.;  
submitted to the EMBL Data Library, May 1998

A/Description: Arabidopsis thaliana chromosome 1 BAC F20D22 complete sequence.

A/Reference number: 214214

A/Accession: T00958

A/Status: translated from GB/EMBL/DBJ

A/Molecule type: DNA

A/Residues: 1-1012 <YYS>

A/Cross-references: UNIPROT:O64492; UNIPARC:UPI00000481BD; EMBL:AC002411; NID:g2570223;

C/Genetics:

A/Gene: ATSP:F20D22.8

A/Map position: 1

C/Superfamily: Arabidopsis thaliana hypothetical protein F20D22.8

Query Match 27.3% Score 50.5; DB 2; Length 1012;

Best Local Similarity 31.0%; Pred. No. 57;

Matches 13; Conservative 8; Mismatches 12; Indels 9; Gaps 2;

QY 2 VSTQAVLPD---DFPRYPVGKFF---QYDTWQAGRL 34

DB 886 ISHAETVFPDELBEEFDPTPTSGFDVVRMRVDRVRSIAGRV 927

# RESULT 15

T31352

hypothetical protein - Pelargonium x hortorum

C/Species: Pelargonium x hortorum

C/Date: 02-Sep-2000 #sequence\_revision 02-Sep-2000 #text\_change 31-Dec-2004

C/Accession: T31352

R/Downie, S.R.; Katz-Downie, D.S.; Wolfe, K.H.; Calie, P.J.; Palmer, J.D.

Curr. Genet. 25, 367-378, 1994

A/Title: Structure and evolution of the largest chloroplast gene (ORF2280) : internal pla

A/Reference number: Z21012; MUID:94363755; PMID:8082181

A/Accession: T31352

A/Status: preliminary; translated from GB/EMBL/DBJ

A/Molecule type: DNA

A/Residues: 1-2109 <DOM>

A/Cross-references: UNIPROT:Q32836; UNIPARC:UPI0000090BFB; EMBL:M83200; NID:g468913; PIR

C/Superfamily: Protein ycf2

Query Match 27.3% Score 50.5; DB 2; Length 2109;

Best Local Similarity 40.7%; Pred. No. 1.3e+02;

Matches 11; Conservative 5; Mismatches 6; Indels 5; Gaps 1;

QY 5 SOAVLPDDFP-----RYVGKFFQYDT 26

DB 790 SKIIPDDFPQSGDERYNLCKSFHFPT 816

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Job time : 20.6667 secs

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GenCore version 5.1.8  
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OM protein - protein search, using sw model

Run on: May 21, 2006, 12:31:30 ; Search time 162.333 Seconds

(without alignments)  
193.740 Million cell updates/sec

Title: US-10-632-366-3

Perfect score: 185  
Sequence: 1 DVSTSQAVLDDFPYVKGKFPQYDTWRQSGRL 34

Scoring table: BLOSUM62  
Gapop 10.0 , Gapext 0.5

Searched: 2849598 seqs, 925015592 residues

Total number of hits satisfying chosen parameters: 2849598

Minimum DB seq length: 0  
Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%  
Maximum Match 100%  
Listing first 45 summaries

Database : Uniprot 7.2:\*  
1: uniprot\_sprot:\*  
2: uniprot\_trembl:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	185	100.0	180	1	IGF2_MOUSE
2	185	100.0	180	2	Q2IDG5_MOUSE
3	185	100.0	191	2	Q2IDG7_MOUSE
4	177	95.7	154	2	Q63265_RAT
5	177	95.7	180	1	IGF2_RAT
6	156	84.3	128	1	IGF2_CAVPO
7	154	83.2	129	1	IGF2_MUSVI
8	150	81.1	180	1	IGF2_HUMAN
9	150	81.1	181	1	IGF2_PIG
10	143	77.3	123	2	Q8MJ15_PIG
11	132	71.4	179	1	IGF2_SHEEP
12	130	70.3	78	2	Q5WTF7_RAT
13	128	69.2	104	2	Q862E7_BOVIN
14	128	69.2	141	2	Q862E1_BOVIN
15	128	69.2	149	2	Q9MYX4_BOVIN
16	128	69.2	155	1	IGF2_BOVIN
17	123	66.5	113	2	Q9N1S5_CAPCA
18	123	66.5	184	2	Q673E2_DIDMA
19	122	65.9	115	2	Q5O0K5_BOVUS
20	122	65.9	181	1	IGF2_HORSE
21	119	64.3	106	2	Q9MYZ6_TRIVU
22	99	53.5	62	2	Q9XSE8_HORSE
23	92	49.7	57	2	Q28237_CEREL
24	59	31.9	298	2	Q5W1L0_BACGR
25	59	31.9	930	2	Q4SY14_GVIRU
26	59	31.9	930	2	Q63Y08_BURPS
27	58.5	31.6	951	2	Q7ZTD6_GGALL
28	58	31.4	185	2	Q8XW68_RALSO
29	55.5	30.0	151	2	Q9N171_ORNAN
30	55.5	30.0	239	2	Q673F3_ORNAN
31	55	29.7	675	2	Q4G0K0_HUMAN

32	55	29.7	717	1	CTLS5_HUMAN	Q95W2 macaca fasc
33	55	29.7	719	1	CTLS5_HUMAN	Q8NC57 homo sapien
34	54.5	29.5	122	2	Q8NMF3_HUMAN	Q8WMP3 taxodiu
35	54.5	29.5	539	2	Q7S413_NEUR	Q7S413 neurospora
36	54.5	29.5	952	2	Q9NH88_HELPN	Q9NH88 helioverpa
37	54	29.2	252	2	Q3A3B5_PELDC	Q3A3B5 peliopecter
38	54	29.2	620	2	Q5F877_DICDI	Q5F877 dictyosella
39	53.5	28.9	191	2	Q403K4_9CONI	Q403K4 taxodium di
40	53.5	28.9	191	2	Q403K5_9CONI	Q403K5 taxodium di
41	53.5	28.9	191	2	Q403K8_9CONI	Q403K8 taxodium di
42	53.5	28.9	191	2	Q403K9_9CONI	Q403K9 taxodium di
43	53.5	28.9	191	2	Q403L2_9CONI	Q403L2 taxodium di
44	53.5	28.9	191	2	Q403L3_9CONI	Q403L3 taxodium di
45	53.5	28.9	191	2	Q815V8_9CONI	Q815V8 taxodium di

## ALIGNMENTS

RESULT 1  
IGF2\_MOUSE STANDARD; PRT; 180 AA.  
ID IGF2\_MOUSE  
AC P09535;  
DT 01-JUL-1989, integrated into UniprotKB/Swiss-Prot.  
DT 01-JUL-1989, sequence version 1.  
DT 07-FEB-2006, entry version 57.  
DE Insulin-like growth factor II precursor (Multiplication-stimulating polypeptide) (IGF-II).  
GN Name=Igf2; Synonyms=Igf-2;  
OS Mus musculus (Mouse).  
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi; OC Muridae; Muridae; Murinae; Mus.  
OX NCBI\_Taxid=10090;  
RN [1]  
RP NUCLEOTIDE SEQUENCE.  
RX MEDLINE=87053171; PubMed=3780370;  
RA Stempien M.M., Fong N.M., Rall L.B., Bell G.I.;  
RT "Sequence of a placental cDNA encoding the mouse insulin-like growth factor II precursor."  
RL DNA 5:357-361(1986).  
RN [2]  
RP NUCLEOTIDE SEQUENCE.  
RX MEDLINE=91090843; PubMed=1702294;  
RA Rotwein P., Hall L.U.;  
RT "Evolution of insulin-like growth factor II: characterization of the mouse IGF-II gene and identification of two pseudo-exons."  
RL DNA Cell Biol. 9:725-735(1990).  
RN [3]  
RP NUCLEOTIDE SEQUENCE.  
RX MEDLINE=97191545; PubMed=9039503; DOI=10.1093/dnares/3.5.331;  
RA Sasaki H., Shimozaki K., Zubair M., Aoki N., Hatano N., Moore T., Fell R., Constancia M., Reik W., Rotwein P.;  
RT "Nucleotide sequence of a 28-kb mouse genomic region comprising the imprinted Igf2 gene."  
RL DNA Res. 3:331-335(1996).  
RN [4]  
RP NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA].  
RC STRAIN=C57BL/6J; TISSUE=Embryo;  
RX MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;  
RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G., Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D., Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Hsieh F., Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hale F., Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L., Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E., Brownstein M.J., Umed T.B., Toshynski S., Carninci P., Prange C., Raha S.S., Lochuano N.A., Peters G.J., Abramson R.D., Mulhally S.J., Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H., Richards S.K., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hultky S.W., Villalón D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A., Fahey J., Hulton E., Kettman M., Madan A., Rodriguez S., Sanchez A., Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

RQ	SEQUENCE	180 AA,	20030 MW,	01730F885E6ED7B CRC64;
FT	DISULFID	70	75	By similarity.
FT	DISULFID	45	84	By similarity.
FT	REGION	33	71	D.
FT	REGION	86	91	B.
FT	REGION	53	64	A.
FT	REGION	65	85	C.
FT	REGION	55	84	A.
FT	PROPEP	92	180	/FTId=PRO_00000015720. E peptide.
FT	CHAIN	25	91	Insulin-like growth factor II. /FTId=PRO_00000015721.
DR	SIGNAL	1	24	
KW	Growth factor; Mitogen; Signal.			
DR	SMART; SMO0078; IIGF_1.			
DR	PROSITE; PS00262; INSULIN; 1.			
DR	Growth factor; Mitogen; Signal.			
DR	PRINTS; PRO0277; INSULINB.			
DR	ProdDom; PD001048; Bombyxin; 1.			
DR	InterPro; IPRO04824; Bombyxin.			
DR	InterPro; IPRO04825; Ins/Igf/relax.			
DR	Pfam; PF00049; Insulin; 1.			
DR	GO; GO:0005515; F:organogenesis; IMP.			
DR	GO; GO:0005515; F:protein binding; IPI.			
DR	GO; GO:0005159; F:insulin-like growth factor receptor binding; IPI.			
DR	GO; GO:0005615; C:extracellular space; TNS.			
DR	MGI; MGI:96434; Igf2.			
DR	Ensembl; ENSMUSG0000048583; Mus musculus.			
DR	SMR; P09535; 25-91.			
DR	HSSP; P01344; IIGL.			
DR	EMBL; M14951; AAA37683.1; -; mRNA.			
CC	-1- SUBCELLULAR LOCATION: Secreted protein.			
CC	-1- DEVELOPMENTAL STAGE: Low levels of expression during myoblast proliferation. Levels rise rapidly during myoblast differentiation and then decrease.			
CC	-1- SIMILARITY: Belongs to the insulin family.			
CC	Copyrighted by the UniProt Consortium, see http://www.uniprot.org/terms Distributed under the Creative Commons Attribution-NoDerivs license			
CC	EMBL; M14951; AAA37683.1; -; mRNA.			
DR	EMBL; M36332; AAA37926.1; -; Genomic DNA.			
DR	EMBL; M36331; AAA37926.1; JOINED; Genomic DNA.			
DR	EMBL; U71085; AAC53516.1; -; Genomic DNA.			
DR	EMBL; BC053489; AAB53489.1; -; mRNA.			
DR	EMBL; M24633; AAA37923.1; -; Genomic DNA.			
DR	EMBL; X71921; CAAS0737.1; -; Genomic DNA.			
DR	EMBL; X71922; CAAS0738.1; -; Genomic DNA.			
DR	PIR; A24913; A24913.			
DR	HSSP; P01344; IIGL.			
DR	SMR; P09535; 25-91.			
DR	Ensembl; ENSMUSG0000048583; Mus musculus.			
DR	MGI; MGI:96434; Igf2.			
DR	GO; GO:0005615; C:extracellular space; TNS.			
DR	GO; GO:0005159; F:insulin-like growth factor receptor binding; IPI.			
DR	GO; GO:0005515; F:protein binding; IPI.			
DR	GO; GO:0005515; F:organogenesis; IMP.			
DR	InterPro; IPRO04824; Bombyxin.			
DR	InterPro; IPRO04825; Ins/Igf/relax.			
DR	Pfam; PF00049; Insulin; 1.			
DR	PRINTS; PRO0277; INSULINB.			
DR	ProdDom; PD001048; Bombyxin; 1.			
DR	SMART; SMO0078; IIGF_1.			
DR	PROSITE; PS00262; INSULIN; 1.			
KW	Growth factor; Mitogen; Signal.			
FT	SIGNAL	1	24	
FT	CHAIN	25	91	Insulin-like growth factor II. /FTId=PRO_00000015720. E peptide.
FT	PROPEP	92	180	/FTId=PRO_00000015721.
FT	REGION	25	52	B.
FT	REGION	53	64	A.
FT	REGION	65	85	A.
FT	REGION	86	91	D.
FT	DISULFID	33	71	D.
FT	DISULFID	45	84	By similarity.
FT	DISULFID	70	75	By similarity.
FO	SEQUENCE	180 AA,	20030 MW,	01730F885E6ED7B CRC64;

	Query Match	100.0%;	Score 185;	DB 1;	Length 180;	
	Best Local Similarity	100.0%;	Pred. No. 2.8e-18;			
	Matches	34;	Conservative	0;	Mismatches	0;
Oy	1 DVSTSOAVLPDDPPRPYGVGKFFQYDITWRQAGRL	34				
Dd	93 DVSTSOAVLPDDPPRPYGVGKFFQYDITWRQAGRL	126				
	RESULT 2					
	Q2IDG5_MUSSP	PRELIMINARY;	PRT;	180 AA.		
AC	Q2IDG5:					
DT	07-MAR-2006,	integrated into UniProtKB/TREMBL.				
DT	07-MAR-2006,	sequence version 1.				
DE	Inulin-like growth factor 2.					
GN	Name=IGF2; ORFNames=XX-CH35_17P24.2-002;					
OS	Mus spretus (Western wild mouse).					
OC	Eukaryota; Metazoa; Chordata; Cnidaria; Vertebrata; Euteleostomi;					
CC	Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;					
OX	Muridea; Muridae; Murinae; Mus.					
RN	[1]					
RP	Nucleotide SEQUENCE.					
RA	Matthews L.;					
RL	Submitted (FEB-2006) to the EMBL/GenBank/DDBJ databases.					
CC	Copyrighted by the UniProt Consortium, see http://www.uniprot.org/terms					
CC	Distributed under the Creative Commons Attribution-NoDerivs License					
DR	EMBL; CT027994; CAJ76273.1;-? Genomic DNA.					
SQ	SEQUENCE	180 AA;	19889 MW;	SCA4059326E8BDB0 CRC64;		
	Query Match	100.0%;	Score 185;	DB 2;	Length 180;	
	Best Local Similarity	100.0%;	Pred. No. 2.8e-18;			
	Matches	34;	Conservative	0;	Mismatches	0;
Oy	1 DVSTSOAVLPDDPPRPYGVGKFFQYDITWRQAGRL	34				
Dd	93 DVSTSOAVLPDDPPRPYGVGKFFQYDITWRQAGRL	126				
	RESULT 3					
	Q2IDG7_MUSSP	PRELIMINARY;	PRT;	191 AA.		
ID	Q2IDG7:					
AC	Q2IDG7:	integrated into UniProtKB/TREMBL.				
DT	07-MAR-2006,	sequence version 1.				
DT	07-MAR-2006,	entry version 1.				
DE	Inulin-like growth factor 2.					
GN	Name=IGF2; ORFNames=XX-CH35_17P24.2-001;					
OS	Mus spretus (Western wild mouse).					
OC	Eukaryota; Metazoa; Chordata; Cnidaria; Vertebrata; Euteleostomi;					
CC	Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;					
OX	Muridea; Muridae; Murinae; Mus.					
OX	NCBI_TaxId=10096;					
RN	[1]					
RP	Nucleotide SEQUENCE.					
RA	Matthews L.;					
RL	Submitted (FEB-2006) to the EMBL/GenBank/DDBJ databases.					
CC	Copyrighted by the UniProt Consortium, see http://www.uniprot.org/terms					
CC	Distributed under the Creative Commons Attribution-NoDerivs License					
CC	EMBL; CT027994; CAJ76271.1;-? Genomic DNA.					
SQ	SEQUENCE	191 AA;	20920 MW;	B12171ZB496A78BA CRC64;		
	Query Match	100.0%;	Score 185;	DB 2;	Length 191;	
	Best Local Similarity	100.0%;	Pred. No. 3e-18;			
	Matches	34;	Conservative	0;	Mismatches	0;

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QY      1 DVSTSQAVLPDDPPRYPVGKFFQYDTRWQSAGRL 34
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Db      104 DVSTSQAVLPDDPPRYPVGKFFQYDTRWQSAGRL 137

RESULT 4
063265 RAT PRELIMINARY; PRT; 154 AA.
ID 063265 RAT
AC 063265 RAT
DT 01-NOV-1996, integrated into UniProtKB/TrEMBL.
DT 01-NOV-1996, sequence version 1.
DT 07-FEB-2006, entry version 29.
DE Rat insulin-like growth factor II (fragment).
OS Rattus norvegicus (Rat).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
OC Muridae; Muridae; Murinae; Rattus.
OX NCBI_TaxId=10116;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RA Rechler M.M., Bruni C.B., Whitfield H.J., Yang Y.W.-H., Frunzio R.,
RA Graham D.E., Colligan J.E., Terrell J.E., Acquaviva A.M., Nissley S.P.,
RT "Characterization of the biosynthetic precursor for rat insulin-like
RT growth factor II by biosynthetic labeling, radiosequencing, and
RT nucleotide sequence analysis of a cDNA clone.";
RL Cancer Cells 3:131-138(1985).
CC -1- SUBCELLULAR LOCATION: Secreted (By similarity).
CC -1- SIMILARITY: Belongs to the insulin family.
CC Copyrighted by the UniProt Consortium, see http://www.uniprot.org/terms
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CC -----
DR EMBL, M36868; AAA41433.1; -; mRNA.
DR HSSP; P01344; 1IGL.
DR SMR; Q63265; 1-65.
DR GO; GO:0005576; C:extracellular region; IEA.
DR GO; GO:0005179; F:hormone activity; IEA.
DR GO; GO:0007582; P:physiological process; IEA.
DR InterPro; IPR004825; Ins/IGF/relax.
DR InterPro; IPR003234; Insulin-like.
DR Pfam; PF00049; Insulin; 1.
DR PRINTS; PR00277; INSULINB.
DR ProDom; PD015667; Mollusc_ins; 1.
DR SMART; SM00078; IIGF; 1.
DR PROSITE; PS00262; INSULIN; 1.
DR NON_TER 1
SQ SEQUENCE 154 AA; 17376 MW; 2AD45125E68B615E CRC64;

Query Match 95.7%; Score 177; DB 2; Length 154;
Best Local Similarity 94.1%; Pred. No. 3.3e-17;
Matches 32; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

QY      1 DVSTSQAVLPDDPPRYPVGKFFQYDTRWQSAGRL 34
      |||||
Db      67 DVSTSQAVLPDDPPRYPVGKFFQYDTRWQSAGRL 100

RESULT 5
IGF2 RAT STANDARD; PRT; 180 AA.
ID IGF2 RAT
AC P01346;
DT 21-UTR-1986, integrated into UniProtKB/Swiss-Prot.
DT 20-MAR-1987, sequence version 1.
DT 07-FEB-2006, entry version 59.
DE Insulin-like growth factor II precursor (IGF-II) (multiplication-
DE stimulating polypeptide) (Multiplication-stimulating activity) (MSA).
GN Name:IGF2; Synonyms:IGF-2;
OS Rattus norvegicus (Rat).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;
OC Muridae; Muridae; Murinae; Rattus.
OX NCBI_TaxId=10116;
RN [1]

```

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RP NUCLEOTIDE SEQUENCE.
RC STRAIN=BRL-3A;
RX MEDLINE=84285593; PubMed=6382022;
RA Dull T.J., Gray A., Hayflick J.S., Ullrich A.;
RT "Insulin-like growth factor II precursor gene organization in relation
RT to insulin gene family.";
RL Nature 310:777-781(1984).
RN [2]
RP NUCLEOTIDE SEQUENCE.
RC STRAIN=Buffalo;
RX MEDLINE=85215534; PubMed=3889836;
RA Soares M.B., Ishii D.N., Efstratiadis A.;
RT "Developmental and tissue-specific expression of a family of
RT transcripts related to rat insulin-like growth factor II mRNA.";
RL Nucleic Acids Res. 13:1119-1134(1985).
RN [3]
RP NUCLEOTIDE SEQUENCE.
RX MEDLINE=87226166; PubMed=2438416;
RA Soares M.B., Turken A., Ishii D.N., Mills L., Episkopou V., Cotter S.,
RA Zeitlin S., Efstratiadis A.;
RT "Rat insulin-like growth factor II gene. A single gene with two
RT promoters expressing a multitranscript family.";
RL J. Mol. Biol. 192:737-752(1986).
RN [4]
RP NUCLEOTIDE SEQUENCE.
RX MEDLINE=87057436; PubMed=3023383;
RA Frunzio R., Chariotetti L., Brown A.L., Graham D.E., Rechler M.M.,
RA Bruni C.B.;
RT "Structure and expression of the rat insulin-like growth factor II
RT (IGF-II) gene. rIGF-II RNAs are transcribed from two promoters.";
RL J. Biol. Chem. 261:17338-17349(1986).
RN [5]
RP NUCLEOTIDE SEQUENCE.
RX MEDLINE=89000793; PubMed=3167060; DOI=10.1016/0167-4781(88)90138-8;
RA Ueno T., Takahashi K., Matsuguchi T., Endo H., Yamamoto M.;
RT "Transcriptional deviation of the rat insulin-like growth factor II
RT gene initiated at three alternative leader-exons between neonatal
RT tissues and ascites hepatomas.";
RL Biochim. Biophys. Acta 950:411-419(1988).
RN [6]
RP NUCLEOTIDE SEQUENCE OF 62-180.
RX MEDLINE=85061532; PubMed=6390212;
RA Whitfield H.J., Bruni C.B., Frunzio R., Terrell J.E., Nissley S.P.,
RA Rechler M.M.;
RT "Isolation of a cDNA clone encoding rat insulin-like growth factor-II
RT precursor.";
RL Nature 312:277-280(1984).
RN [7]
RP NUCLEOTIDE SEQUENCE OF 103-180.
RX MEDLINE=89127259; PubMed=3221878;
RA Chariotetti L., Brown A.L., Frunzio R., Clemmons D.R., Rechler M.M.,
RA Bruni C.B.;
RT "Structure of the rat insulin-like growth factor II transcriptional
RT unit: heterogeneous transcripts are generated from two promoters by
RT use of multiple polyadenylation sites and differential ribonucleic
RT acid splicing.";
RL Mol. Endocrinol. 2:1115-1126(1988).
RN [8]
RP PROTEIN SEQUENCE OF 25-91.
RX MEDLINE=81215670; PubMed=7016879;
RA Marguier H., Todaro G.J., Henderson L.E., Oroszian S.;
RT "Purification and primary structure of a polypeptide with
RT multiplication-stimulating activity from rat liver cell cultures.
RT Homology with human insulin-like growth factor II.";
RL J. Biol. Chem. 256:6859-6865(1981).
CC -1- FUNCTION: The insulin-like growth factors possess growth-promoting
CC activity. In vitro, they are potent mitogens for cultured cells.
CC IGF-II is influenced by placental lactogen and may play a role in
CC fetal development.
CC -1- SUBCELLULAR LOCATION: Secreted protein.
CC -1- SIMILARITY: Belongs to the insulin family.
CC -----
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CC EMBL; X00911; CAA25428.1; -; mRNA.

DR EMBL; X00911; CAA25427.1; ALT\_INIT; mRNA.

DR EMBL; X00911; CAA25429.1; ALT\_INIT; mRNA.

DR EMBL; M13871; AAB95624.1; ALT\_INIT; Genomic DNA.

DR EMBL; M13868; AAB95624.1; JOINED; Genomic DNA.

DR EMBL; M13870; AAB95624.1; JOINED; Genomic DNA.

DR EMBL; M29880; AAA41391.1; -; Genomic DNA.

DR EMBL; M29879; AAA41391.1; JOINED; Genomic DNA.

DR EMBL; X02213; CAA26136.1; -; mRNA.

DR EMBL; X14833; CAA34993.1; -; mRNA.

DR EMBL; X14834; CAA32943.1; -; mRNA.

DR EMBL; M30273; AAA41432.1; -; mRNA.

DR EMBL; M31221; AAA42046.1; -; Genomic DNA.

DR PIR; A25350; IGRT2.

DR HSSP; P01344; 1IGL.

DR SMR; P01346; 25-91.

DR Ensembl; ENSRNOG0000020369; Rattus norvegicus.

DR RGD; 2870; Igf2.

DR InterPro; IPR004824; Bombyxin.

DR InterPro; IPR004825; Ins/IGF/relax.

DR Pfam; PF00049; Insulin; 1.

DR PRINTS; PR00277; INSULIN.

DR ProDom; PD001048; Bombyxin; 1.

DR SMART; SM00078; IIGF; 1.

DR PROSITE; PS00262; INSULIN; 1.

DR KM Direct protein sequencing; Growth factor; Mitogen; Signal.

FT SIGNAL 1 24

FT CHAIN 25 91

FT PROPE 92 180

FT REGION 25 52

FT REGION 53 64

FT REGION 65 85

FT REGION 86 91

FT DISULFID 33 71

FT DISULFID 45 84

FT DISULFID 70 75

FT CONFLICT 1 8

FT CONFLICT 57 57

SQ SEQUENCE 180 AA; 20086 MW; AF12B4EBC0DBCC34 CRC64;

Query Match 95.7%; Score 177; DB 1; Length 180;

Best Local Similarity 94.1%; Pred. No. 4e-17;

Matches 32; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

QY 1 DVSTSQAVLPDPFPRYPVGKFFOYDTWRQSGRL 34

DB 93 DVSTSQAVLPDPFPRYPVGKFFOYDTWRQSGRL 126

RESULT 6

IGF2\_CAVPO STANDARD; PRT; 128 AA.

ID IGF2\_CAVPO

AC Q08279;

DT 01-FEB-1995, integrated into UniProtKB/Swiss-Prot.

DT 01-FEB-1995, sequence version 1.

DT 07-FEB-2006, entry version 41.

DE Insulin-like growth factor II precursor (IGF-II) (Somatomedin A) (Fragment).

GN Name=IGF2;

OS Cavia porcellus (Guinea pig).

OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; OC Hystricognathi; Caviidae; Cavia.

OX NCBI\_TaxID=10141;

RN NUCLEOTIDE SEQUENCE [MRNA].

RP STRAIN=Harley; TISSUE=Liver;

RC MEDLINE=9324600; PubMed=1301379; DOI=10.1016/0303-7207(92)90216-S;

RA Levinovitz A., Norstedt G., van den Berg S., Robinson I.C.A.F., Ekstrom T.J.;

RT "Isolation of an insulin-like growth factor II cDNA from guinea pig liver: expression and developmental regulation.";

RL Mol. Cell. Endocrinol. 89:105-110(1992).

CC -1- FUNCTION: The insulin-like growth factors possess growth-promoting activity. In vitro, they are potent mitogens for cultured cells.

CC IGF-II is influenced by placental lactogen and may play a role in fetal development.

CC -1- SUBCELLULAR LOCATION: Secreted protein.

CC -1- DEVELOPMENTAL STAGE: Expressed predominantly in fetal tissues and at lower levels in adult.

CC -1- SIMILARITY: Belongs to the insulin family.

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CC EMBL; S59899; AAB26479.1; -; mRNA.

DR PIR; I57671; I57671.

DR HSSP; P01344; 1IGL.

DR SMR; Q08279; 25-91.

DR InterPro; IPR004824; Bombyxin.

DR InterPro; IPR004825; Ins/IGF/relax.

DR Pfam; PF00049; Insulin; 1.

DR PRINTS; PR00277; INSULIN.

DR ProDom; PD001048; Bombyxin; 1.

DR SMART; SM00078; IIGF; 1.

DR PROSITE; PS00262; INSULIN; 1.

DR KM Growth factor; Mitogen; Signal.

FT SIGNAL 1 24

FT CHAIN 25 91

FT PROPE 92 >128

FT REGION 25 52

FT REGION 53 64

FT REGION 65 85

FT REGION 86 91

FT DISULFID 33 71

FT DISULFID 45 84

FT DISULFID 70 75

FT NON TER 128 128

SQ SEQUENCE 128 AA; 14420 MW; BC55A1D81A4CE056 CRC64;

Query Match 84.3%; Score 156; DB 1; Length 128;

Best Local Similarity 85.3%; Pred. No. 3e-14;

Matches 29; Conservative 1; Mismatches 4; Indels 0; Gaps 0;

QY 1 DVSTSQAVLPDPFPRYPVGKFFOYDTWRQSGRL 34

DB 93 DVSTSQAVLPDPFPRYPVGKFFOYDTWRQSGRL 126

RESULT 7

IGF2\_MUSVI STANDARD; PRT; 129 AA.

ID IGF2\_MUSVI

AC P41634;

DT 01-NOV-1995, integrated into UniProtKB/Swiss-Prot.

DT 01-NOV-1995, sequence version 1.

DT 07-FEB-2006, entry version 34.

DE Insulin-like growth factor II precursor (IGF-II) (Fragment).

GN Name=IGF2;

OS Mustela vison (American mink).

OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Laurasiatheria; Carnivora; Fissipedia; Mustelidae; OC Mustelinae; Mustela.

OX NCBI\_TaxID=9667;

RN NUCLEOTIDE SEQUENCE [MRNA].

RP TISSUE=Liver;

RC MEDLINE=93307613; PubMed=7686523; DOI=10.1006/gen.1993.1079;

RA Ekstrom T.J., Baacklin B.M., Lindqvist Y., Ekstrom W.;

"Insulin-like growth factor II in the mink (Mustela vison):

RT determination of a cDNA nucleotide sequence and developmental  
 RL regulation of its expression."  
 CC Gen. Comp. Endocrinol. 90:243-250(1993).  
 CC -I- FUNCTION: The insulin-like growth factors possess growth-promoting  
 CC activity. In vitro, they are potent mitogens for cultured cells.  
 CC IGF-II is influenced by placental lactogen and may play a role in  
 CC fetal development.  
 CC -I- SUBCELLULAR LOCATION: Secreted protein.  
 CC -I- SIMILARITY: Belongs to the insulin family.  
 CC -----  
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 CC -----  
 DR EMBL: S63459; AAB27392.2; -; mRNA.  
 DR HSSP: P01344; 11GL.  
 DR SMR: P41694; 25-92.  
 DR InterPro: IPR004825; Ins/IGF/relax.  
 DR Pfam: PF00049; Insulin; 1.  
 DR PRINTS: PR00277; INSULINB.  
 DR SMART: SM00078; IIGF; 1.  
 DR PROSITE: PS00262; INSULIN; 1.  
 KM Growth factor; Mitogen; Signal.  
 FT SIGNAL 1 24  
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 AC P01344; P76449; Q14299; Q9UC68; Q9UC69;  
 DT 21-UTL-1986; Integrated into UniProtKB/Swiss-Prot.  
 DT 21-UTL-1986; sequence version 1.  
 DE 07-FEB-2006; entry version 81.  
 DE Insulin-like growth factor II precursor (IGF-II) (Somatomedin A)  
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 GN Name=IGF2; ORNames=PP1446;  
 OS Homo sapiens (Human).  
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
 OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae;  
 OC Homo.  
 OC NCBI\_TaxID=9606;  
 RN NUCLEOTIDE SEQUENCE (ISOFORM 1).  
 RX MEDLINE=84295593; PubMed=6382022;  
 RA Dull T.J., Gray A., Hayflick J.S., Ullrich A.;  
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 RT to insulin gene family."  
 RL Nature 310:777-781(1984).  
 RN NUCLEOTIDE SEQUENCE (ISOFORM 1).  
 RX MEDLINE=84295592; PubMed=6382021;  
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 RT factor II.";  
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 RN NUCLEOTIDE SEQUENCE (ISOFORM 1).  
 RX MEDLINE=88158110; PubMed=2450353;  
 RA Shen S.-J., Daimon M., Wang C.-Y., Jansen M., Ilan J.;  
 RT "Isolation of an insulin-like growth factor II cDNA with a unique 5'  
 RT untranslated region from human placenta."  
 RL Proc. Natl. Acad. Sci. U.S.A. 85:1947-1951(1988).  
 RN NUCLEOTIDE SEQUENCE (ISOFORM 1).  
 RX MEDLINE=86108862; PubMed=3002851; DOI=10.1016/0014-5793(86)80156-9;  
 RA de Pagter-Holthuisen P., van Schaik F.M.A., Verdult G.M.,  
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 RN NUCLEOTIDE SEQUENCE (ISOFORM 1).  
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 RX MEDLINE=85102019; PubMed=3881277; DOI=10.1016/0014-5793(85)80527-5;  
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 RN NUCLEOTIDE SEQUENCE (ISOFORM 1).  
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 RN NUCLEOTIDE SEQUENCE (LARGE SCALE MRNA) (ISOFORM 1).  
 RX PubMed=15498874; DOI=10.1073/pnas.0404089101;  
 RA Wan D., Gong Y., Qin W., Zhang P., Li J., Wei L., Zhou X., Li H.,  
 RA Qiu X., Zhong F., He L., Yu J., Yao G., Jiang H., Qian L., Yu Y.,  
 RA Shu H., Chen X., Xu H., Guo M., Pan Z., Chen Y., Ge C., Yang S.,  
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 RN NUCLEOTIDE SEQUENCE (LARGE SCALE MRNA) (ISOFORM 1).  
 RX PubMed=15498874; DOI=10.1073/pnas.0404089101;  
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 RT "Cloning of human full-length cDNAs in BD Creator(TM) system donor  
 RT vector."  
 RL Submitted (MAY-2003) to the EMBL/GenBank/DBJ databases.  
 RN NUCLEOTIDE SEQUENCE (GENOMIC DNA).  
 RA Rieder M.J., Armet T.Z., Carrington D.P., Ozuna M., Kuldanek S.A.,  
 RA Rajkumar N., Toth E.J., Yi Q., Nickerson D.A.;  
 RT "SeattleSNPs: NHLBI HUG6682 program for genomic applications, UW-  
 RT FHCRC, Seattle, WA (URL: <http://pga.gs.washington.edu>).";  
 RT Submitted (MAY-2002) to the EMBL/GenBank/DBJ databases.

RA [12] NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA] (ISOFORM 1).  
RC TISSUE=Muscle;  
RX MEDLINE=2238827; PubMed=12477932; DOI=10.1073/pnas.242603899;  
RA Klausner R.D., Collins F.S., Wagner L., Shennan C.M., Schler G.D.,  
Altehouli S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,  
Hopkins R.F., Jordan H., Moore T., Max S.I., Wang Y., Hsieh F.,  
Diachenko L., Marusha K., Farmer A.A., Rubin G.M., Hong L.,  
Stapleton M., Soares M.B., Bonaldi M.F., Cassavant T.L., Scheetz T.E.,  
Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Schreier J.,  
Raha S.S., Loggellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,  
Bosak S.A., Mcwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,  
Richards S., Morley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,  
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Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,  
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and mouse cDNA sequences.";  
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RN NUCLEOTIDE SEQUENCE OF 103-180.  
RX MEDLINE=89000779; PubMed=3167054; DOI=10.1016/0167-4781(88)90124-8;  
RA de Pagter-Holthuisen P., van der Kammen R.A., Jansen M.,  
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gene. Characterization of the IGF-II mRNAs and an mRNA encoding a  
putative IGF-II-associated protein.";  
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RN NUCLEOTIDE SEQUENCE OF 1-161 (ISOFORM 2).  
RX MEDLINE=8800517; PubMed=3653397; DOI=10.1016/0014-5793(87)80216-8;  
RA le Bouc Y., Noguez P., Sondermeijer P., Dreyer D., Girard F.,  
Binoux M.;  
RT "A new 5'-non-coding region for human placental insulin-like growth  
factor II mRNA expression.";  
FEBS Lett. 222:181-185(1987).  
RN [15]  
RN NUCLEOTIDE SEQUENCE OF 1-52.  
RC TISSUE=Liver;  
RX MEDLINE=88003966; PubMed=3652904;  
RA Gray A., Tam A.W., Dull T.J., Hayflick J.S., Pintar J., Cavenee W.K.,  
Koufos A., Ullrich A.;  
RT "Tissue-specific and developmentally regulated transcription of the  
insulin-like growth factor 2 gene.";  
DNA 6:283-295(1987).  
RN [16]  
RN PROTEIN SEQUENCE OF 25-91.  
RX MEDLINE=78191259; PubMed=658418; DOI=10.1016/0014-5793(78)80237-3;  
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RN [17]  
RN PARTIAL PROTEIN SEQUENCE, AND DISULFIDE BONDS.  
RX MEDLINE=89255428; PubMed=2722836;  
RA Smith M.C., Cook J.A., Furman T.C., Oocowicz J.L.;  
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RN PROTEIN SEQUENCE OF 25-68.  
RX MEDLINE=9530205; PubMed=7633596; DOI=10.1016/0378-4347(94)00576-Q;  
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J. Chromatogr. B 666:203-214(1995).  
RN [19]  
RN MASS SPECTROMETRY, AND PROCESSING.  
RX MEDLINE=22474139; PubMed=12586351; DOI=10.1016/S0014-5793(03)00042-5;

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RN [20]  
RN MASS SPECTROMETRY, AND PROCESSING.  
RX PubMed=15359740; DOI=10.1021/pr049338j;  
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RT "Quantitative mass spectrometric immunoassay of insulin like growth  
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J. Proteome Res. 3:851-855(2004).  
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RN CARBOHYDRATE-LINKAGE SITE THR-99.  
RX MEDLINE=92235026; PubMed=1559071;  
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RT "The identification of O-glycosylated precursors of insulin-like  
growth factor II.";  
J. Biol. Chem. 267:8153-8160(1992).  
RN [22]  
RN 3D-STRUCTURE MODELING.  
RX MEDLINE=83210259; PubMed=6189745;  
RA Blundell T.L., Bedarke S., Humbel R.E.;  
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insulinlike growth factors.";  
Fed. Proc. 42:2592-2597(1983).  
RN [23]  
RN STRUCTURE BY NMR.  
RX MEDLINE=95080243; PubMed=7527339;  
RA Terasawa H., Kohda D., Hatanaka H., Nagata K., Higashinashi N.,  
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DT 01-FEB-1996, sequence version 2.  
DT 07-FEB-2006, entry version 48.  
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RN NUCLEOTIDE SEQUENCE.  
RX MEDLINE=91057136; PubMed=2243790;  
RA Catchpole I.R., Engstroem W.;  
RT "Nucleotide sequence of a porcine insulin-like growth factor II  
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Nucleic Acids Res. 18:6430-6430(1990).  
RN [2]  
RN NUCLEOTIDE SEQUENCE.  
RC STRAIN=Large white.  
RX MEDLINE=2215958; PubMed=12140686; DOI=10.1007/s00335-001-3059-X;  
RA Amarger V., Nguyen M., Van Laere A.-S., Braunschweig M., Nezer C.,  
Georges M., Andersson L.;  
RT "Comparative sequence analysis of the INS-IGF2-H19 gene cluster in  
pigs.";  
Mamm. Genome 13:388-398(2002).  
RN [3]  
RN NUCLEOTIDE SEQUENCE.  
RC STRAIN=European wild boar, Hampshire, Japanese wild boar, Landrace,  
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RX MEDLINE=22935770; PubMed=14574411; DOI=10.1038/nature02064;  
RA Van Laere A.-S., Nguyen M., Braunschweig M., Nezer C., Collette C.,  
RA Moreau L., Archibald A.L., Haley C., Buys N., Tally M., Andersson G.,  
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RT growth in the pig."  
RL Nature 425:832-836(2003).  
[4]  
RP PROTEIN SEQUENCE OF 25-91.  
RA MEDLINE=90039035; PubMed=2809477;  
RA Francis G.L., Owens P.C., McNeill K.A., Wallace J.C., Ballard F.J.,  
RT "Purification, amino acid sequences and assay cross-reactivities of  
RT porcine insulin-like growth factor-I and -II."  
RL J. Endocrinol. 122:681-687(1989).  
CC -I- FUNCTION: The insulin-like growth factors possess growth-promoting  
CC activity. In vitro, they are potent mitogens for cultured cells.  
CC IGF-II is influenced by placental lactogen and may play a role in  
CC fetal development.  
CC -I- SUBCELLULAR LOCATION: Secreted protein.  
CC -I- SIMILARITY: Belongs to the insulin family.  
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CC Copyrighted by the UniProt Consortium, see <http://www.uniprot.org/terms>  
CC Distributed under the Creative Commons Attribution-NonDerivs License  
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DR EMBL: AY42102; AAQ00964.1; -; Genomic DNA.  
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DR EMBL: AY42106; AAQ00976.1; -; Genomic DNA.  
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DR EMBL: AY42110; AAQ00986.1; -; Genomic DNA.  
DR EMBL: AY42111; AAQ00988.1; -; Genomic DNA.  
DR EMBL: AY42112; AAQ00991.1; -; Genomic DNA.  
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DR Pfam: PF00049; Insulin.1.  
DR PRINTS: PR00277; INSULIN.1.  
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DT 01-OCT-2002, sequence version 1.  
DT 07-FEB-2006, entry version 15.  
DE Insulin-like growth factor 2 preproprotein (Fragment).  
GN Name=IGF2;  
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CC NUCLEOTIDE SEQUENCE.  
RX MEDLINE=22135958; PubMed=12140686; DOI=10.1007/s00335-001-3059-x;  
RA Amarger V., Nguyen M., Van Laere A.-S., Braunschweig M., Nezer C.,  
RA Georges M., Andersson L.,  
RT "Comparative sequence analysis of the INS-IGF2-H19 gene cluster in  
RT pigs."  
RL Mamm. Genome 13:388-398(2002).  
CC -I- SUBCELLULAR LOCATION: Secreted (By similarity).  
CC -I- SIMILARITY: Belongs to the insulin family.  
CC -----  
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CC Distributed under the Creative Commons Attribution-NonDerivs License  
CC -----  
DR EMBL: AF466299; AAMB3400.1; -; mRNA.  
DR HSSP: P01344; 11GL.  
DR SMR: Q8WJ15; 25-91.  
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DR GO: GO:0005179; F:hormone activity; IEA.  
DR GO: GO:0018445; F:prothoracicotropic hormone activity; IEA.  
DR GO: GO:0007582; P:physiological process; IEA.  
DR InterPro: IPR004824; Bombyxin.  
DR InterPro: IPR004825; Ins/IGF/relax.  
DR InterPro: IPR003234; Insulin-like.  
DR Pfam: PF00049; Insulin.1.  
DR PRINTS: PR00276; INSULIN.1.  
DR PRINTS: PR00277; INSULIN.1.  
DR PRODOM: PD001048; Bombyxin; 1.  
DR PRODOM: PD015667; Mollusc\_ins; 1.  
DR SMART: SM00078; IIGF; 1.  
DR PROSITE: PS00262; INSULIN; 1.  
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DB 93 DVSTPPTVLPDDNFRYPVVGKFFRDTWKQSA 123  
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AC P10764;  
DT 01-JUL-1989, integrated into UniProtKB/Swiss-Prot.  
DT 01-OCT-1989, sequence version 2.  
DT 07-FEB-2006, entry version 51.  
DE Insulin-like growth factor II precursor (IGF-II).  
GN Name=IGF2;  
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OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
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RP	NUCLEOTIDE SEQUENCE.
RC	TISSUE=Liver;
RX	MEDLINE=89345107; PubMed=2762134;
RA	O'Mahoney J.V., Adams T.E.;
RT	"The nucleotide sequence of an ovine insulin-like growth factor-II cDNA.";
RL	Nucleic Acids Res. 17:5392-5392(1989).
RN	[2]
RP	NUCLEOTIDE SEQUENCE.
RC	TISSUE=Liver;
RX	MEDLINE=90356421; PubMed=2388846;
RA	Brown W.M., Dieglelewska K.M., Foreman R.C., Saunders N.R.;
RT	"The nucleotide and deduced amino acid sequences of insulin-like growth factor II cDNAs from adult bovine and fetal sheep liver.";
RL	Nucleic Acids Res. 18:4614-4614(1990).
RN	[3]
RP	NUCLEOTIDE SEQUENCE.
RC	STRAIN=Coopworth; TISSUE=Liver;
RX	MEDLINE=93350051; PubMed=8465157; DOI=10.1016/0167-4781(93)90246-A;
RA	Demmer J., Hill D.F., Petersen G.B.;
RT	"Characterization of two sheep insulin-like growth factor II cDNAs with different 5'-untranslated regions.";
RL	Biochim. Biophys. Acta 1173:79-80(1993).
RN	[4]
RP	NUCLEOTIDE SEQUENCE.
RC	TISSUE=Liver;
RA	Ohlsen S.M., Wong E.A.;
RL	Submitted (SEP-1990) to the EMBL/GenBank/DBJ databases.
RN	[5]
RP	PROTEIN SEQUENCE OF 25-91
RX	MEDLINE=89136887; PubMed=2537174;
RA	Francis G.B., McNeil K.A., Wallace J.C., Ballard F.J., Owens P.C.;
RT	"Sheep insulin-like growth factors I and II: sequences, activities and assays.";
RL	Endocrinology 124:1173-1183(1989).
RN	[6]
RP	PROTEIN SEQUENCE OF 25-58
RX	MEDLINE=89323215; PubMed=2752053; DOI=10.1016/0167-4838(89)90131-3;
RA	Hey A.W., Browne C.A., Simpson R.J., Thorburn G.D.;
RT	"Simultaneous isolation of insulin-like growth factors I and II from adult sheep serum.";
RL	Biochim. Biophys. Acta 997:27-35(1989).
CC	-I- FUNCTION: The insulin-like growth factors possess growth-promoting activity. In vitro, they are potent mitogens for cultured cells
CC	IGF-II is influenced by placental lactogen and may play a role in fetal development.
CC	-I- SUBCELLULAR LOCATION: Secreted protein.
CC	-I- SIMILARITY: Belongs to the insulin family.
CC	-----
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CC	Distributed under the Creative Commons Attribution-NonDerivs license
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DR	EMBL; U00668; AAB60626.1; -; Genomic DNA.
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DR	EMBL; X15248; CAA33324.1; -; mRNA.
DR	EMBL; X53554; CAA37621.1; -; mRNA.
DR	EMBL; M89788; AAA31548.1; -; mRNA.
DR	EMBL; M89789; AAA31549.1; -; mRNA.
DR	EMBL; X55638; CAA39163.1; -; mRNA.
DR	PIR; S04858; S04858.
DR	HSSP; P01344; IIGL.
DR	SMR; P10764; 25-91.
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DR	PRINTS; PR00277; INSULINB.
DR	SMART; SM00078; IIGF; 1.
DR	PROSITE; PS00262; INSULIN; 1.
KW	Direct protein sequencing; Growth factor; Mitogen; Signal.
FT	SIGNAL
FT	CHAIN 1 24 Insulin-like growth factor II.
FT	PROPEP 92 179 /FTId=PRO_0000015731.
FT	E peptide.
FT	/FTId=PRO_0000015732.

FT	REGION	25	52	B.
FT	REGION	53	64	C.
FT	REGION	65	85	A.
FT	REGION	86	91	D.
FT	DISULFID	33	71	By similarity.
FT	DISULFID	45	84	By similarity.
FT	DISULFID	70	75	By similarity.
FT	CONFLICT	46	47	GD -> DG (in Ref. 5).
SO	SEQUENCE	179 AA;	19616 MW;	7B369AE57F2E4378 CRC64;
Oy	Query Match		71.4%;	Score 132; DB 1;
	Best Local Similarity	73.5%;	Pred. No. 1.3e-10;	
	Matches	25; Conservative	1; Mismatches	8; Indels
Db		1	DVSTSQAVLPDDPRYPVGKFPQVDTRQSGRL	34
		93	DVASASTVLPDDFTAPVGKFPQSDTRKQSTQRL	126
RESULT 12				
ID	OS3WT7_RAT	PRELIMINARY;	PRT;	78 AA.
AC	OS3WT7_			
DT	24-MAY-2005,	integrated into UniProtKB/TrEMBL.		
DT	24-MAY-2005,	sequence version 1.		
DT	07-FEB-2006,	entry version 3.		
DE	Insulin-like growth factor II gene (Fragment).			
GN	Name=IGFII;			
OS	Rattus norvegicus (Rat).			
OC	Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;			
OC	Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi;			
OC	Muridea; Muridae; Murinae; Rattus.			
OX	NCBI_TaxID=10116;			
RN	[1]			
RP	NUCLEOTIDE SEQUENCE.			
RC	STRAIN=Sprague-Dawley;			
RX	MEDLINE=90001243; PubMed=2477062; DOI=10.1016/0167-4781(89)90074-2;			
RA	Ueno T., Takahashi K., Matsuguchi T., Ikejiri K., Endo H.,			
RA	Yamamoto M.;			
RT	"Multiple polyadenylation sites in a large 3'-most exon of the rat			
RL	Insulin-like growth factor II gene.";			
RL	Biochim. Biophys. Acta 1009:27-34(1989).			
CC	Copyrighted by the UniProt Consortium, see <a href="http://www.uniprot.org/terms">http://www.uniprot.org/terms</a>			
CC	Distributed under the Creative Commons Attribution-NonDerivs License			
CC				
DR	EMBL; X16703; CAA34674.1; -; mRNA.			
FT	NON TER	1		
SO	SEQUENCE	78 AA;	8983 MW;	7E827486A086C31 CRC64;
	Query Match		70.3%;	Score 130; DB 2;
	Best Local Similarity	91.7%;	Pred. No. 9.7e-11;	
	Matches	22; Conservative	2; Mismatches	0; Indels
Oy		11	DDPRYPVGKFPQVDTRQSGRL	34
		1	DDPRYPVGKFPQVDTRQSGRL	24
Db		1	DDPRYPVGKFPQVDTRQSGRL	24
RESULT 13				
ID	Q862E7_BOVIN	PRELIMINARY;	PRT;	104 AA.
AC	Q862E7_			
DT	01-JUN-2003,	integrated into UniProtKB/TrEMBL.		
DT	07-JUN-2003,	sequence version 1.		
DT	07-FEB-2006,	entry version 16.		
DE	Similar to insulin-like growth factor II (Fragment).			
OS	Bos taurus (Bovine).			
OC	Eukaryota; Metazoa; Chordata; Cranista; Vertebrata; Euteleostomi;			
OC	Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Ruminantia;			
OC	Pecora; Bovidae; Bovinae; Bos.			
OX	NCBI_TaxID=9913;			
RN	[1]			



RP NUCLEOTIDE SEQUENCE.  
 RX MEDLINE=22544902; PubMed=12658628; DOI=10.1002/mrd.10292;  
 RA Ishiwata H., Katsuma S., Kizaki K., Patel O.V., Nakano H.,  
 RA Takahashi T., Imai K., Hirasawa A., Shiojima S., Ikawa H., Suzuki Y.,  
 RA Tsujimoto G., Izaike Y., Todoroki J., Hashizume K.;  
 RT "Characterization of gene expression profiles in early bovine  
 pregnancy using a custom cDNA microarray.";  
 RL Mol. Reprod. Dev. 65:9-18(2003).  
 CC -1- SUBCELLULAR LOCATION: Secreted (By similarity).  
 CC -1- SIMILARITY: Belongs to the insulin family.  
 CC Copyrighted by the UniProt Consortium, see <http://www.uniprot.org/terms>  
 CC Distributed under the Creative Commons Attribution-NonDerivs License  
 CC  
 CC EMBL; AB099052; BAC56542.1; -; mRNA.  
 DR HSSP; P01344; 1IGL.  
 DR GO; GO:0005576; C:extracellular region; IEA.  
 DR GO; GO:0005179; F:hormone activity; IEA.  
 DR GO; GO:0007582; P:physiological process; IEA.  
 DR InterPro; IPR004825; Ins/IGF/relax.  
 DR Pfam; PF00049; Insulin; 1.  
 DR PROSITE; PS00262; INSULIN; 1.  
 FT NON TER 1  
 SQ SEQUENCE 104 AA; 11708 MW; BBE8781F13EEFE3C CRC64;  
 Query Match 69.2%; Score 128; DB 2; Length 104;  
 Best Local Similarity 70.6%; Pred. No. 2.6e-10;  
 Matches 24; Conservative 1; Mismatches 9; Indels 0; Gaps 0;  
 Oy 1 DVSTSQAVLPDDPRYPVGKFFQYDTWRSAGRL 34  
 Db 27 DVASITVLPDDVTAYPVGKFFQYDIWKOSTORL 60  
 RESULT 14  
 Q862G1\_BOVIN PRELIMINARY; PRT; 141 AA.  
 AC Q862G1;  
 DT 01-JUN-2003, integrated into UniProtKB/TrEMBL.  
 DT 01-JUN-2003, sequence version 1.  
 DT 07-FEB-2006, entry version 15.  
 DE Similar to insulin-like growth factor II (Fragment).  
 OS Bos taurus (Bovine).  
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
 OC Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Ruminantia;  
 OC Pecora; Bovidae; Bovinae; Bos.  
 ON NCBI\_Taxid=9913;  
 RN [1]  
 RP NUCLEOTIDE SEQUENCE.  
 RX MEDLINE=22544902; PubMed=12658628; DOI=10.1002/mrd.10292;  
 RA Ishiwata H., Katsuma S., Kizaki K., Patel O.V., Nakano H.,  
 RA Takahashi T., Imai K., Hirasawa A., Shiojima S., Ikawa H., Suzuki Y.,  
 RA Tsujimoto G., Izaike Y., Todoroki J., Hashizume K.;  
 RT "Characterization of gene expression profiles in early bovine  
 pregnancy using a custom cDNA microarray.";  
 RL Mol. Reprod. Dev. 65:9-18(2003).  
 CC -1- SUBCELLULAR LOCATION: Secreted (By similarity).  
 CC -1- SIMILARITY: Belongs to the insulin family.  
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 CC  
 CC EMBL; AB099053; BAC56523.1; -; mRNA.  
 DR HSSP; P01344; 1IGL.  
 DR GO; GO:0005576; C:extracellular region; IEA.  
 DR GO; GO:0005179; F:hormone activity; IEA.  
 DR GO; GO:0007582; P:physiological process; IEA.  
 DR InterPro; IPR004825; Ins/IGF/relax.  
 DR Pfam; PF00049; Insulin; 1.  
 DR SMART; SM00078; IIGF; 1.  
 DR PROSITE; PS00262; INSULIN; 1.

FT NON TER 1 1  
 FT NON TER 141 141  
 SQ SEQUENCE 141 AA; 15720 MW; 91EB0C5C18716B79 CRC64;  
 Query Match 69.2%; Score 128; DB 2; Length 141;  
 Best Local Similarity 70.6%; Pred. No. 3.7e-10;  
 Matches 24; Conservative 1; Mismatches 9; Indels 0; Gaps 0;  
 Oy 1 DVSTSQAVLPDDPRYPVGKFFQYDTWRSAGRL 34  
 Db 63 DVASITVLPDDVTAYPVGKFFQYDIWKOSTORL 96  
 RESULT 15  
 Q9MYX4\_BOSIN PRELIMINARY; PRT; 149 AA.  
 ID Q9MYX4\_BOSIN  
 AC Q9MYX4;  
 DT 01-OCT-2000, integrated into UniProtKB/TrEMBL.  
 DT 01-OCT-2000, sequence version 1.  
 DT 07-FEB-2006, entry version 22.  
 DE Insulin-like growth factor 2 (Fragment).  
 GN Name=IGF2;  
 OS Bos indicus (Zebu).  
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
 OC Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Ruminantia;  
 OC Pecora; Bovidae; Bovinae; Bos.  
 ON NCBI\_Taxid=9915;  
 RN [1]  
 RP NUCLEOTIDE SEQUENCE.  
 RA Pietrowski D., Dinkel M., Priele K., Wolf E., Foerster M.;  
 RL Submitted (JUN-2000) to the EMBL/GenBank/DBJ databases.  
 CC -1- SUBCELLULAR LOCATION: Secreted (By similarity).  
 CC -1- SIMILARITY: Belongs to the insulin family.  
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 CC Distributed under the Creative Commons Attribution-NonDerivs License  
 CC  
 CC EMBL; AF283002; AAP97244.1; -; mRNA.  
 DR HSSP; P01344; 1IGL.  
 DR SMR; Q9MYX4; 1-61.  
 DR GO; GO:0005576; C:extracellular region; IEA.  
 DR GO; GO:0005179; F:hormone activity; IEA.  
 DR GO; GO:0007582; P:physiological process; IEA.  
 DR InterPro; IPR004825; Ins/IGF/relax.  
 DR Pfam; PF00049; Insulin; 1.  
 DR SMART; SM00078; IIGF; 1.  
 DR PROSITE; PS00262; INSULIN; 1.  
 FT NON TER 1  
 SQ SEQUENCE 149 AA; 16546 MW; 52B796EF17101FBE CRC64;  
 Query Match 69.2%; Score 128; DB 2; Length 149;  
 Best Local Similarity 70.6%; Pred. No. 4e-10;  
 Matches 24; Conservative 1; Mismatches 9; Indels 0; Gaps 0;  
 Oy 1 DVSTSQAVLPDDPRYPVGKFFQYDTWRSAGRL 34  
 Db 63 DVASITVLPDDVTAYPVGKFFQYDIWKOSTORL 96

Search completed: May 21, 2006, 12:45:48  
 Job time : 163.333 secs

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APPLICANT: Conjuchem, Inc.

APPLICANT: Bridon, Dominique  
APPLICANT: Ezrin, Alan  
APPLICANT: Milner, Peter  
APPLICANT: Holmes, Darren  
APPLICANT: Thibaudau, Karen  
TITLE OF INVENTION: PROTECTION OF ENDOGENOUS THERAPEUTIC PEPTIDES FROM  
TITLE OF INVENTION: PEPTIDASE ACTIVITY THROUGH CONJUGATION TO BLOOD  
FILE REFERENCE: 2110  
CURRENT APPLICATION NUMBER: US/09/657,276  
CURRENT FILING DATE: 2000-09-07  
PRIOR APPLICATION NUMBER: 60/134,406  
PRIOR FILING DATE: 1999-05-17  
PRIOR APPLICATION NUMBER: 60/153,406  
PRIOR FILING DATE: 1999-09-10  
PRIOR APPLICATION NUMBER: 60/159,783  
PRIOR FILING DATE: 1999-10-18  
NUMBER OF SEQ ID NOS: 1617  
SOFTWARE: Patentin Ver. 2.1  
SEQ ID NO 381  
LENGTH: 35  
TYPE: PRT  
ORGANISM: Artificial Sequence  
FEATURE:  
OTHER INFORMATION: Description of Artificial Sequence: Synthetic  
US-09-657-276-381

Query Match 81.1%; Score 150; DB 2; Length 35;  
Best Local Similarity 79.4%; Pred. No. 1,7e-15;  
Matches 27; Conservative 2; Mismatches 5; Indels 0; Gaps 0;

Qy 1 DVSTQAVLPDDFPRYPVGKFFQYDTWRQSGRL 34  
Db 2 DVSTPPTVLPDNPFRYPVGKFFQYDTWKQSTQRL 35

RESULT 3  
US-08-950-720A-10  
Sequence 10, Application US/08950720A  
Patent No. 6046028  
GENERAL INFORMATION:  
APPLICANT: Conklin, Darrell C.  
APPLICANT: Lofton-Day, Catherine E.  
APPLICANT: Lok, Si  
APPLICANT: Jasperse, Stephen R.  
TITLE OF INVENTION: INSULIN HOMOLOG  
NUMBER OF SEQUENCES: 17  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Zymogenetics, Inc.  
STREET: 1201 Eastlake Avenue East  
CITY: Seattle  
STATE: WA  
COUNTRY: USA  
ZIP: 98102  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Diskette  
COMPUTER: IBM Compatible  
OPERATING SYSTEM: DOS  
SOFTWARE: FastSeq for Windows Version 2.0  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/950,720A  
FILING DATE:  
CLASSIFICATION: 435  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER:  
FILING DATE:  
ATTORNEY/AGENT INFORMATION:  
NAME: Sawislak, Deborah A.  
REGISTRATION NUMBER: 37,438  
REFERENCE/DOCKET NUMBER: 96-09  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 206-442-6672

TELEFAX: 206-442-6678  
TELEX:  
INFORMATION FOR SEQ ID NO: 10:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 155 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: NO. 6046028e  
US-08-950-720A-10

Query Match 81.1%; Score 150; DB 2; Length 155;  
Best Local Similarity 79.4%; Pred. No. 9.2e-15;  
Matches 27; Conservative 2; Mismatches 5; Indels 0; Gaps 0;

Qy 1 DVSTQAVLPDDFPRYPVGKFFQYDTWRQSGRL 34  
Db 93 DVSTPPTVLPDNPFRYPVGKFFQYDTWKQSTQRL 126

RESULT 4  
US-09-428-226A-7  
Sequence 7, Application US/09428226A  
Patent No. 6548482  
GENERAL INFORMATION:  
APPLICANT: Sundeep, Khosla  
APPLICANT: Conover, Cheryl A.  
TITLE OF INVENTION: TREATMENT OF OSTEOPOROSIS  
FILE REFERENCE: 07039/183001  
CURRENT APPLICATION NUMBER: US/09/428,226A  
CURRENT FILING DATE: 1999-10-27  
PRIOR APPLICATION NUMBER: 09/073,032  
PRIOR FILING DATE: 1998-05-05  
PRIOR APPLICATION NUMBER: 60/045,607  
PRIOR FILING DATE: 1997-05-05  
NUMBER OF SEQ ID NOS: 7  
SOFTWARE: FastSeq for Windows Version 4.0  
SEQ ID NO 7  
LENGTH: 156  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-09-428-226A-7

Query Match 81.1%; Score 150; DB 2; Length 156;  
Best Local Similarity 79.4%; Pred. No. 9.2e-15;  
Matches 27; Conservative 2; Mismatches 5; Indels 0; Gaps 0;

Qy 1 DVSTQAVLPDDFPRYPVGKFFQYDTWRQSGRL 34  
Db 69 DVSTPPTVLPDNPFRYPVGKFFQYDTWKQSTQRL 102

RESULT 5  
US-09-972-809-7  
Sequence 7, Application US/09972809  
Patent No. 6693084  
GENERAL INFORMATION:  
APPLICANT: Sundeep, Khosla  
APPLICANT: Conover, Cheryl A.  
TITLE OF INVENTION: TREATMENT OF OSTEOPOROSIS  
FILE REFERENCE: 07039/183001  
CURRENT APPLICATION NUMBER: US/09/972,809  
CURRENT FILING DATE: 2001-10-05  
PRIOR APPLICATION NUMBER: 09/428,226  
PRIOR FILING DATE: 1999-10-27  
PRIOR APPLICATION NUMBER: 60/045,607  
PRIOR FILING DATE: 1997-05-05  
NUMBER OF SEQ ID NOS: 7  
SOFTWARE: FastSeq for Windows Version 4.0  
SEQ ID NO 7  
LENGTH: 156  
TYPE: PRT  
ORGANISM: Homo sapiens

US-09-972-809-7

Query Match 81.1%; Score 150; DB 2; Length 156;  
Best Local Similarity 79.4%; Pred. No. 9.2e-15;  
Matches 27; Conservative 2; Mismatches 5; Indels 0; Gaps 0;

QY 1 DVSTQAVLPDDPPRYPVGKFFQYDTWRSAGRL 34  
DB 69 DVSTPPTVLPDNPFRYPVGKFFQYDTWKSTORL 102

RESULT 6

US-09-972-809-7  
Sequence 7, Application US/09972809  
Patent No. 6916790

GENERAL INFORMATION:  
APPLICANT: Sundee, Khosla  
APPLICANT: Conover, Cheryl A.  
TITLE OF INVENTION: TREATMENT OF OSTEOPOROSIS  
FILE REFERENCE: 07039/183001  
CURRENT APPLICATION NUMBER: US/09/972,809  
CURRENT FILING DATE: 2001-10-05  
PRIOR APPLICATION NUMBER: 09/428,226  
PRIOR FILING DATE: 1999-10-27  
PRIOR APPLICATION NUMBER: 60/045,607  
PRIOR FILING DATE: 1997-05-05  
NUMBER OF SEQ ID NOS: 7  
SOFTWARE: FastSeq for Windows Version 4.0  
SEQ ID NO 7  
LENGTH: 156  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-09-972-809-7

Query Match 81.1%; Score 150; DB 2; Length 156;  
Best Local Similarity 79.4%; Pred. No. 9.2e-15;  
Matches 27; Conservative 2; Mismatches 5; Indels 0; Gaps 0;

QY 1 DVSTQAVLPDDPPRYPVGKFFQYDTWRSAGRL 34  
DB 69 DVSTPPTVLPDNPFRYPVGKFFQYDTWKSTORL 102

RESULT 7

US-07-953-230A-12  
Sequence 12, Application US/07953230A  
Patent No. 5476779

GENERAL INFORMATION:  
APPLICANT: CHEN, Thomas T  
APPLICANT: SHAMLOTT, Michael J  
TITLE OF INVENTION: INSULIN-LIKE GROWTH FACTORS ISOLATED  
TITLE OF INVENTION: FROM RAINBOW TROUT  
NUMBER OF SEQUENCES: 12  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Burns, Doane, Swecker & Mathis  
STREET: George Mason Bldg., Washington & Prince Sts.  
CITY: Alexandria  
STATE: Virginia  
COUNTRY: United States  
ZIP: 22313-1404  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.25  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/07/953,230A  
FILING DATE: 30-SEP-1992  
CLASSIFICATION: 435  
ATTORNEY/AGENT INFORMATION:  
NAME: Crane-Feuzy, Sharon E  
REGISTRATION NUMBER: 36,113  
REFERENCE/DOCKET NUMBER: 028755-010

TELECOMMUNICATION INFORMATION:

TELEPHONE: (703) 836-6620

TELEFAX: (703) 836-2021

INFORMATION FOR SEQ ID NO: 12:

SEQUENCE CHARACTERISTICS:

LENGTH: 180 amino acids

TYPE: amino acid

STRANDEDNESS: single

TOPOLOGY: linear

MOLECULE TYPE: protein

FEATURE:

NAME/KEY: Peptide

LOCATION: 57

OTHER INFORMATION: /note= "Gap of 1 after 57."

FEATURE:

NAME/KEY: Peptide

LOCATION: 59

OTHER INFORMATION: /note= "Gap of 1 after 59."

FEATURE:

NAME/KEY: Peptide

LOCATION: 63

OTHER INFORMATION: /note= "Gap of 2 after 63."

FEATURE:

NAME/KEY: Peptide

LOCATION: 85

OTHER INFORMATION: /note= "Gap of 2 after 85."

FEATURE:

NAME/KEY: Peptide

LOCATION: 96

OTHER INFORMATION: /note= "Gap of 3 after 96."

FEATURE:

NAME/KEY: Peptide

LOCATION: 97

OTHER INFORMATION: /note= "Gap of 8 after 97."

FEATURE:

NAME/KEY: Peptide

LOCATION: 119

OTHER INFORMATION: /note= "Gap of 1 after 119."

US-07-953-230A-12

Query Match 81.1%; Score 150; DB 1; Length 180;  
Best Local Similarity 79.4%; Pred. No. 1.1e-14;  
Matches 27; Conservative 2; Mismatches 5; Indels 0; Gaps 0;

QY 1 DVSTQAVLPDDPPRYPVGKFFQYDTWRSAGRL 34  
DB 93 DVSTPPTVLPDNPFRYPVGKFFQYDTWKSTORL 126

RESULT 8

US-09-617-389B-19  
Sequence 19, Application US/09617389B  
Patent No. 6709659

GENERAL INFORMATION:  
APPLICANT: Lok, Si  
APPLICANT: Conklin, Darrell C.  
TITLE OF INVENTION: Antibodies That Bind Testis-Specific  
TITLE OF INVENTION: Insulin Homolog Polypeptides  
FILE REFERENCE: 96-06C3  
CURRENT APPLICATION NUMBER: US/09/617,389B  
CURRENT FILING DATE: 2000-07-17  
PRIOR APPLICATION NUMBER: 09/339,148  
PRIOR FILING DATE: 1999-06-24  
PRIOR APPLICATION NUMBER: 08/905,267  
PRIOR FILING DATE: 1997-01-18  
PRIOR APPLICATION NUMBER: 60/023,213  
PRIOR FILING DATE: 1996-02-08  
PRIOR APPLICATION NUMBER: 60/031,592  
PRIOR FILING DATE: 1996-11-21  
NUMBER OF SEQ ID NOS: 24  
SOFTWARE: FastSeq for Windows Version 3.0  
SEQ ID NO 19

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/ LENGTH: 180
/ TYPE: PRT
/ ORGANISM: Human
US-09-617-389B-19

Query Match
Best Local Similarity 81.1%; Score 150; DB 2; Length 180;
Best Local Similarity 79.4%; Pred. No. 1.1e-14;
Matches 27; Conservative 2; Mismatches 5; Indels 0; Gaps 0;

QY 1 DVSTQAVLPDDPPRYVKGKFFQYDTWRQAGRL 34
DB 93 DVSTPPTVLPDNPFRYPVKGKFFQYDTWRKOSTORL 126

RESULT 9
5405942-4
/ Patent No. 5405942
/ APPLICANT: BELL, GRAEME I.; RALL, LESLIE B.; MERRYWEATHER,
/ JAMES P.
/ TITLE OF INVENTION: PREPRO INSULIN-LIKE GROWTH FACTORS
/ 1 AND 11
/ NUMBER OF SEQUENCES: 16
/ CURRENT APPLICATION DATA:
/ APPLICATION NUMBER: US/07/65,673
/ FILING DATE: 16-JUN-1987
/ PRIOR APPLICATION NUMBER: 630,557
/ FILING DATE: 19-JUL-1984
/ SEQ ID NO:4
/ LENGTH: 180
5405942-4

Query Match
Best Local Similarity 81.1%; Score 150; DB 7; Length 180;
Best Local Similarity 79.4%; Pred. No. 1.1e-14;
Matches 27; Conservative 2; Mismatches 5; Indels 0; Gaps 0;

QY 1 DVSTQAVLPDDPPRYVKGKFFQYDTWRQAGRL 34
DB 93 DVSTPPTVLPDNPFRYPVKGKFFQYDTWRKOSTORL 126

RESULT 10
US-09-623-548A-380
/ Sequence 380, Application US/09623548A
/ Patent No. 6849714
/ GENERAL INFORMATION:
/ APPLICANT: Conjuchem, Inc.
/ APPLICANT: Bridon, Dominique
/ APPLICANT: Ezrin, Alan
/ APPLICANT: Milner, Peter
/ APPLICANT: Holmes, Darren
/ APPLICANT: Thibaudau, Karen
/ TITLE OF INVENTION: PROTECTION OF ENDOGENOUS THERAPEUTIC PEPTIDES FROM
/ TITLE OF INVENTION: PEPTIDASE ACTIVITY THROUGH CONJUGATION TO BLOOD
/ TITLE OF INVENTION: COMPONENTS
/ FILE REFERENCE: 2110
/ CURRENT APPLICATION NUMBER: US/09/623,548A
/ CURRENT FILING DATE: 2000-09-05
/ PRIOR APPLICATION NUMBER: 60/134,406
/ PRIOR FILING DATE: 1999-05-17
/ PRIOR APPLICATION NUMBER: 60/153,406
/ PRIOR FILING DATE: 1999-09-10
/ PRIOR APPLICATION NUMBER: 60/159,783
/ PRIOR FILING DATE: 1999-10-18
/ NUMBER OF SEQ ID NOS: 1617
/ SOFTWARE: PatentIn Ver. 2.1
/ SEQ ID NO 380
/ LENGTH: 16
/ TYPE: PRT
/ ORGANISM: Artificial Sequence
/ FEATURE:
/ OTHER INFORMATION: Description of Artificial Sequence: Synthetic
/ OTHER INFORMATION: Peptide
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US-09-623-548A-380

Query Match
Best Local Similarity 34.6%; Score 64; DB 2; Length 16;
Best Local Similarity 75.0%; Pred. No. 0.0058;
Matches 12; Conservative 1; Mismatches 3; Indels 0; Gaps 0;

QY 1 DVSTQAVLPDDPPRY 16
DB 1 DVSTPPTVLPDNPFRY 16

RESULT 11
US-10-360-101-185
/ Sequence 185, Application US/10360101
/ Patent No. 6861236
/ GENERAL INFORMATION:
/ APPLICANT: Molli, Gert N.
/ APPLICANT: Leenhouts, Cornelis J.
/ TITLE OF INVENTION: Export and modification of (poly)peptide in the antibiotic way
/ FILE REFERENCE: 2183-5673
/ CURRENT APPLICATION NUMBER: US/10/360,101
/ CURRENT FILING DATE: 2003-02-07
/ PRIOR APPLICATION NUMBER: EP 02077060.8
/ PRIOR FILING DATE: 2002-05-24
/ NUMBER OF SEQ ID NOS: 309
/ SOFTWARE: PatentIn version 3.1
/ SEQ ID NO 185
/ LENGTH: 16
/ TYPE: PRT
/ ORGANISM: Artificial Sequence
/ FEATURE:
/ OTHER INFORMATION: (C7)-sequence of IGF II 69-84
US-10-360-101-185

Query Match
Best Local Similarity 34.6%; Score 64; DB 2; Length 16;
Best Local Similarity 75.0%; Pred. No. 0.0058;
Matches 12; Conservative 1; Mismatches 3; Indels 0; Gaps 0;

QY 1 DVSTQAVLPDDPPRY 16
DB 1 DVSTPPTVLPDNPFRY 16

RESULT 12
US-09-657-276-380
/ Sequence 380, Application US/09657276
/ Patent No. 6887470
/ GENERAL INFORMATION:
/ APPLICANT: Conjuchem, Inc.
/ APPLICANT: Bridon, Dominique
/ APPLICANT: Ezrin, Alan
/ APPLICANT: Milner, Peter
/ APPLICANT: Holmes, Darren
/ APPLICANT: Thibaudau, Karen
/ TITLE OF INVENTION: PROTECTION OF ENDOGENOUS THERAPEUTIC PEPTIDES FROM
/ TITLE OF INVENTION: PEPTIDASE ACTIVITY THROUGH CONJUGATION TO BLOOD
/ TITLE OF INVENTION: COMPONENTS
/ FILE REFERENCE: 2110
/ CURRENT APPLICATION NUMBER: US/09/657,276
/ CURRENT FILING DATE: 2000-09-07
/ PRIOR APPLICATION NUMBER: 60/134,406
/ PRIOR FILING DATE: 1999-05-17
/ PRIOR APPLICATION NUMBER: 60/153,406
/ PRIOR FILING DATE: 1999-09-10
/ PRIOR APPLICATION NUMBER: 60/159,783
/ PRIOR FILING DATE: 1999-10-18
/ NUMBER OF SEQ ID NOS: 1617
/ SOFTWARE: PatentIn Ver. 2.1
/ SEQ ID NO 380
/ LENGTH: 16
/ TYPE: PRT
/ ORGANISM: Artificial Sequence
/ FEATURE:
/ OTHER INFORMATION: Description of Artificial Sequence: Synthetic
/ OTHER INFORMATION: Peptide
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; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
; OTHER INFORMATION: Peptide
US-09-657-276-380
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Query Match          34.6%; Score 64; DB 2; Length 16;
Best Local Similarity 75.0%; Pred. No. 0.0058;
Matches 12; Conservative 1; Mismatches 3; Indels 0; Gaps 0;
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QY 1 DVSTQAVLPDDPRY 16
    |||||
Db 1 DVSTPTVLPDNPFRY 16
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RESULT 13
US-10-104-047-2454
; Sequence 2454, Application US/10104047
; Patent No. 6943241
; GENERAL INFORMATION:
; APPLICANT: HELIX RESEARCH INSTITUTE
; TITLE OF INVENTION: No. 6943241el full length cDNA
; FILE REFERENCE: H1-A0105
; CURRENT APPLICATION NUMBER: US/10/104,047
; PRIOR FILING DATE: 2002-03-25
; PRIOR APPLICATION NUMBER:
; PRIOR FILING DATE:
; NUMBER OF SEQ ID NOS: 4096
; SOFTWARE: Patentin Ver. 2.1
; SEQ ID NO 2454
; LENGTH: 403
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-104-047-2454
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Query Match          29.7%; Score 55; DB 2; Length 403;
Best Local Similarity 41.4%; Pred. No. 5;
Matches 12; Conservative 4; Mismatches 9; Indels 4; Gaps 1;
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```
QY 10 PDDFPRYPV---GKFRQYTWRSAGRL 34
    |||||
Db 177 PDDIPRIPTAFGRAIRHTGSLAFGSL 205
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```
RESULT 14
US-10-104-047-3465
; Sequence 3465, Application US/10104047
; Patent No. 6943241
; GENERAL INFORMATION:
; APPLICANT: HELIX RESEARCH INSTITUTE
; TITLE OF INVENTION: No. 6943241el full length cDNA
; FILE REFERENCE: H1-A0105
; CURRENT APPLICATION NUMBER: US/10/104,047
; PRIOR FILING DATE: 2002-03-25
; PRIOR APPLICATION NUMBER:
; PRIOR FILING DATE:
; NUMBER OF SEQ ID NOS: 4096
; SOFTWARE: Patentin Ver. 2.1
; SEQ ID NO 3465
; LENGTH: 717
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-104-047-3465
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Query Match          28.6%; Score 53; DB 2; Length 717;
Best Local Similarity 41.4%; Pred. No. 19;
Matches 12; Conservative 3; Mismatches 10; Indels 4; Gaps 1;
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```
QY 10 PDDFPRYP---VGKFRQYTWRSAGRL 34
    |||||
Db 493 PDDIPRIPTAFGRAIRHTGSLAFGSL 521
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RESULT 15
US-09-336-643A-14
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; Sequence 14, Application US/09336643A
; Patent No. 6399761
; GENERAL INFORMATION:
; APPLICANT: Miller, Andrew P.
; APPLICANT: Curran, Mark Edward
; APPLICANT: Hu, Ping
; APPLICANT: Rutter, Marc
; APPLICANT: Wang, Jian-Wang
; TITLE OF INVENTION: No. 6399761el Human Potassium Channels
; FILE REFERENCE: SEQ-15P
; CURRENT APPLICATION NUMBER: US/09/336,643A
; PRIOR FILING DATE: 1999-06-18
; PRIOR APPLICATION NUMBER: 60/076,687
; PRIOR FILING DATE: 1998-08-07
; PRIOR APPLICATION NUMBER: 60/116,448
; PRIOR FILING DATE: 1999-01-19
; PRIOR APPLICATION NUMBER: PCT/US99/03826
; PRIOR FILING DATE: 1999-02-22
; NUMBER OF SEQ ID NOS: 87
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 14
; LENGTH: 256
; TYPE: PRT
; ORGANISM: H. sapiens
; FEATURE:
; NAME/KEY: VARIANT
; LOCATION: (1)...(256)
; OTHER INFORMATION: Xaa = Any Amino Acid
US-09-336-643A-14
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Query Match          28.4%; Score 52.5; DB 2; Length 256;
Best Local Similarity 32.4%; Pred. No. 7.1;
Matches 12; Conservative 7; Mismatches 11; Indels 2;
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QY 4 TSQAVLPDDFPRYPV---GKFRQ-----YDTRQ 29
    |||||
Db 93 TSKLIPDDPKDYTLIYBAKYFQLQPMLEMERWQ 129
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Search completed: May 21, 2006, 12:48:28
Job time : 31 secs
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Copyright (c) 1993 - 2006 Bioacceleration Ltd.

OM protein - protein search, using sw model

Run on: May 21, 2006, 12:47:06 ; Search time 103 Seconds

(Without alignments)  
152.906 Million cell updates/sec

Title: US-10-632-366-3

Perfect score: 185  
Sequence: 1 DVSTSQAVLPDDPPRYVGVKFFOYDTWRQSGRL 34

Scoring table: BLOSUM62  
Gapop 10.0 , Gapext 0.5

Searched: 2097797 seqs, 463214858 residues

Total number of hits satisfying chosen parameters: 2097797

Minimum DB seq length: 0  
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%  
Maximum Match 100%

Listing first 45 summaries

Database : Published Applications AA Main:  
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2: /EMC\_Celerra\_SIDS3/prodata/2/pubppaa/US08\_PUBCOMB.pep:\*  
3: /EMC\_Celerra\_SIDS3/prodata/2/pubppaa/US09\_PUBCOMB.pep:\*  
4: /EMC\_Celerra\_SIDS3/prodata/2/pubppaa/US10\_PUBCOMB.pep:\*  
5: /EMC\_Celerra\_SIDS3/prodata/2/pubppaa/US10B\_PUBCOMB.pep:\*  
6: /EMC\_Celerra\_SIDS3/prodata/2/pubppaa/US11\_PUBCOMB.pep:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	185	100.0	34	3	US-09-745-078A-4
2	185	100.0	34	4	US-10-374-624-4
3	185	100.0	34	4	US-10-632-366-3
4	185	100.0	351	4	US-10-388-838-107
5	177	95.7	34	3	US-09-745-078A-3
6	177	95.7	34	4	US-10-374-624-3
7	177	95.7	34	4	US-10-632-366-2
8	177	95.7	180	4	US-10-258-666-2
9	150	81.1	34	3	US-09-745-078A-2
10	150	81.1	34	4	US-10-374-624-2
11	150	81.1	34	4	US-10-632-366-1
12	150	81.1	35	6	US-11-066-697-381
13	150	81.1	156	3	US-09-972-809-7
14	150	81.1	156	5	US-10-872-198-122
15	150	81.1	156	6	US-11-021-951-122
16	150	81.1	176	4	US-10-388-838-112
17	150	81.1	180	4	US-10-081-119-38
18	150	81.1	180	4	US-10-136-841-2
19	150	81.1	180	4	US-10-097-340-145
20	150	81.1	180	4	US-10-295-027-199
21	150	81.1	180	4	US-10-272-531A-2
22	150	81.1	180	4	US-10-173-999-99
23	150	81.1	180	4	US-10-272-483A-2
24	150	81.1	180	4	US-10-443-466A-21
25	150	81.1	180	4	US-10-188-832-84
26	150	81.1	180	4	US-10-700-725-19
27	150	81.1	180	4	US-10-706-791-5

28	150	81.1	180	4	US-10-770-668-46	Sequence 46, Appl
29	150	81.1	180	5	US-10-741-600-1133	Sequence 1133, Ap
30	150	81.1	180	5	US-10-951-389-38	Sequence 38, Appl
31	150	81.1	180	5	US-10-951-406-38	Sequence 38, Appl
32	150	81.1	180	5	US-10-951-477-38	Sequence 38, Appl
33	150	81.1	180	5	US-10-977-087-38	Sequence 38, Appl
34	150	81.1	180	5	US-10-981-267-2	Sequence 2, Appl
35	150	81.1	180	6	US-11-049-518-18	Sequence 18, Appl
36	150	81.1	180	6	US-11-050-926-145	Sequence 145, App
37	150	81.1	225	5	US-10-821-234-971	Sequence 971, App
38	146	78.9	33	3	US-09-745-078A-5	Sequence 5, Appl
39	146	78.9	33	4	US-10-374-624-5	Sequence 5, Appl
40	144	77.8	1107	6	US-11-057-058-41	Sequence 41, Appl
41	143	77.3	30	3	US-09-745-078A-8	Sequence 8, Appl
42	143	77.3	30	4	US-10-374-624-8	Sequence 8, Appl
43	143	77.3	31	3	US-09-745-078A-7	Sequence 7, Appl
44	143	77.3	31	4	US-10-374-624-7	Sequence 7, Appl
45	143	77.3	32	3	US-09-745-078A-6	Sequence 6, Appl

## ALIGNMENTS

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RESULT 1
US-09-745-078A-4
; Sequence 4, Application US/09745078A
; Publication No. US20030505434A1
; GENERAL INFORMATION:
; APPLICANT: Garth J. S. COOPER
; APPLICANT: Christina M. BUCHANAN
; TITLE OF INVENTION: PEPTIDE
; FILE REFERENCE: 441842000100
; CURRENT APPLICATION NUMBER: US/09/745,078A
; CURRENT FILING DATE: 2000-12-20
; PRIOR APPLICATION NUMBER: NZ336359
; PRIOR FILING DATE: 1999-06-18
; PRIOR APPLICATION NUMBER: PCT/NZ00/00102
; PRIOR FILING DATE: 2000-06-19
; NUMBER OF SEQ ID NOS: 35
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 4
; LENGTH: 34
; TYPE: PRT
; ORGANISM: Mus Musculus
; FEATURE:
; OTHER INFORMATION: Preptin
US-09-745-078A-4

Query Match      100.0%; Score 185; DB 3; Length 34;
Best Local Similarity 100.0%; Pred. No. 3.8e-19;
Matches 34; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      1 DVSTSQAVLPDDPPRYVGVKFFOYDTWRQSGRL 34
Db      1 DVSTSQAVLPDDPPRYVGVKFFOYDTWRQSGRL 34

RESULT 2
US-10-374-624-4
; Sequence 4, Application US/10374624
; Publication No. US20030166561A1
; GENERAL INFORMATION:
; APPLICANT: Garth J. S. COOPER
; APPLICANT: Christina M. BUCHANAN
; TITLE OF INVENTION: PEPTIDE
; FILE REFERENCE: 441842000100
; CURRENT APPLICATION NUMBER: US/10/374,624
; CURRENT FILING DATE: 2003-02-24
; PRIOR APPLICATION NUMBER: US/09/745,078A
; PRIOR FILING DATE: 2000-12-20
; PRIOR APPLICATION NUMBER: NZ336359
; PRIOR FILING DATE: 1999-06-18
; PRIOR APPLICATION NUMBER: PCT/NZ00/00102
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/ PRIOR FILING DATE: 2000-06-19
/ NUMBER OF SEQ ID NOS: 35
/ SOFTWARE: FastSeq for Windows Version 4.0
/ SEQ ID NO 4
/ LENGTH: 34
/ TYPE: PRT
/ ORGANISM: Mus Musculus
/ FEATURE:
/ OTHER INFORMATION: Preptin
US-10-374-624-4
```

```
Query Match          100.0%; Score 185; DB 4; Length 34;
Best Local Similarity 100.0%; Pred. No. 3,8e-19;
Matches 34; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
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```
Qy      1 DVSTSOAVLPDDPPRYPVGKFFQYDTWROSAGRL 34
Db      1 DVSTSOAVLPDDPPRYPVGKFFQYDTWROSAGRL 34
```

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RESULT 3
US-10-632-366-3
/ Sequence 3; Application US/10632366
/ Publication No. US20040142393A1
/ GENERAL INFORMATION:
/ APPLICANT: COOPER, GARTH JAMES SMITH
/ APPLICANT: BUCHANAN, CHRISTINE NAREE
/ APPLICANT: JAMES, GABRIEL CHRISTOPHER
/ TITLE OF INVENTION: METHODS OF USE OF COMPOUNDS WITH PREPTIN FUNCTION
/ FILE REFERENCE: 49123.000033.UTL1
/ CURRENT APPLICATION NUMBER: US/10/632,366
/ PRIOR FILING DATE: 2003-07-31
/ PRIOR APPLICATION NUMBER: 60/400,445
/ PRIOR FILING DATE: 2002-08-01
/ NUMBER OF SEQ ID NOS: 20
/ SOFTWARE: PatentIn version 3.2
/ SEQ ID NO 3
/ LENGTH: 34
/ TYPE: PRT
/ ORGANISM: Mus musculus
US-10-632-366-3
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```
Query Match          100.0%; Score 185; DB 4; Length 34;
Best Local Similarity 100.0%; Pred. No. 3,8e-19;
Matches 34; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
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```
Qy      1 DVSTSOAVLPDDPPRYPVGKFFQYDTWROSAGRL 34
Db      1 DVSTSOAVLPDDPPRYPVGKFFQYDTWROSAGRL 34
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```
RESULT 4
US-10-388-838-107
/ Sequence 107; Application US/10388838
/ Publication No. US20040180344A1
/ GENERAL INFORMATION:
/ APPLICANT: David W. Morris
/ APPLICANT: Marc Malandro
/ TITLE OF INVENTION: Novel Therapeutic Targets in Cancer
/ FILE REFERENCE: 529452001600
/ CURRENT APPLICATION NUMBER: US/10/388,838
/ PRIOR FILING DATE: 2003-03-14
/ NUMBER OF SEQ ID NOS: 114
/ SOFTWARE: FastSeq for Windows Version 4.0
/ SEQ ID NO 107
/ LENGTH: 351
/ TYPE: PRT
/ ORGANISM: Mus musculus
US-10-388-838-107
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Query Match          100.0%; Score 185; DB 4; Length 351;
Best Local Similarity 100.0%; Pred. No. 4,7e-18;
Matches 34; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
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```
Qy      1 DVSTSOAVLPDDPPRYPVGKFFQYDTWROSAGRL 34
Db      264 DVSTSOAVLPDDPPRYPVGKFFQYDTWROSAGRL 297
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RESULT 5
US-09-745-078A-3
/ Sequence 3; Application US/09745078A
/ Publication No. US20030050434A1
/ GENERAL INFORMATION:
/ APPLICANT: Garth J. S. COOPER
/ APPLICANT: Christina M. BUCHANAN
/ TITLE OF INVENTION: PEPTIDE
/ FILE REFERENCE: 441842000100
/ CURRENT APPLICATION NUMBER: US/09/745,078A
/ PRIOR FILING DATE: 2000-12-20
/ PRIOR APPLICATION NUMBER: NZ336359
/ PRIOR FILING DATE: 1999-06-18
/ PRIOR APPLICATION NUMBER: PCT/NZ00/00102
/ PRIOR FILING DATE: 2000-06-19
/ NUMBER OF SEQ ID NOS: 35
/ SOFTWARE: FastSeq for Windows Version 4.0
/ SEQ ID NO 3
/ LENGTH: 34
/ TYPE: PRT
/ ORGANISM: Rattus Sp.
/ FEATURE:
/ OTHER INFORMATION: Preptin
US-09-745-078A-3
```

```
Query Match          95.7%; Score 177; DB 3; Length 34;
Best Local Similarity 94.1%; Pred. No. 5,4e-18;
Matches 32; Conservative 2; Mismatches 0; Indels 0; Gaps 0;
```

```
Qy      1 DVSTSOAVLPDDPPRYPVGKFFQYDTWROSAGRL 34
Db      1 DVSTSOAVLPDDPPRYPVGKFFQYDTWROSAGRL 34
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```
RESULT 6
US-10-374-624-3
/ Sequence 3; Application US/10374624
/ Publication No. US20030166561A1
/ GENERAL INFORMATION:
/ APPLICANT: Garth J. S. COOPER
/ APPLICANT: Christina M. BUCHANAN
/ TITLE OF INVENTION: PEPTIDE
/ FILE REFERENCE: 441842000100
/ CURRENT APPLICATION NUMBER: US/10/374,624
/ PRIOR FILING DATE: 2003-02-24
/ PRIOR APPLICATION NUMBER: US/09/745,078A
/ PRIOR FILING DATE: 2000-12-20
/ PRIOR APPLICATION NUMBER: NZ336359
/ PRIOR FILING DATE: 1999-06-18
/ PRIOR APPLICATION NUMBER: PCT/NZ00/00102
/ PRIOR FILING DATE: 2000-06-19
/ NUMBER OF SEQ ID NOS: 35
/ SOFTWARE: FastSeq for Windows Version 4.0
/ SEQ ID NO 3
/ LENGTH: 34
/ TYPE: PRT
/ ORGANISM: Rattus Sp.
/ FEATURE:
/ OTHER INFORMATION: Preptin
US-10-374-624-3
```

```
Query Match          95.7%; Score 177; DB 4; Length 34;
Best Local Similarity 94.1%; Pred. No. 5,4e-18;
Matches 32; Conservative 2; Mismatches 0; Indels 0; Gaps 0;
```

```
Qy      1 DVSTSOAVLPDDPPRYPVGKFFQYDTWROSAGRL 34
```

Db 1 DVSTSQAVLPDDPFRYPVGKFFKFDTWROSAGRL 34

```
RESULT 7
US-10-632-366-2
; Sequence 2, Application US/10632366
; Publication No. US20040142393A1
; GENERAL INFORMATION:
; APPLICANT: COOPER, GARTH JAMES SMITH
; APPLICANT: BUCHANAN, CHRISTINE MAREE
; APPLICANT: JAMES, GABRIEL CHRISTOPHER
; TITLE OF INVENTION: METHODS OF USE OF COMPOUNDS WITH PREPTIN FUNCTION
; FILE REFERENCE: 49123.000033.UTL1
; CURRENT APPLICATION NUMBER: US/10/632,366
; PRIOR FILING DATE: 2003-07-31
; PRIOR APPLICATION NUMBER: 60/400,445
; PRIOR FILING DATE: 2002-08-01
; NUMBER OF SEQ ID NOS: 20
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 2
; LENGTH: 34
; TYPE: PRT
; ORGANISM: Rattus norvegicus
US-10-632-366-2
```

Query Match 95.7%; Score 177; DB 4; Length 34;  
Best Local Similarity 94.1%; Pred. No. 5,4e-18;  
Matches 32; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

QY 1 DVSTSQAVLPDDPFRYPVGKFFQYDTWROSAGRL 34  
Db 1 DVSTSQAVLPDDPFRYPVGKFFKFDTWROSAGRL 34

```
RESULT 8
US-10-258-666-2
; Sequence 2, Application US/10258666
; Publication No. US20040005578A1
; GENERAL INFORMATION:
; APPLICANT: Yamada, Yoji
; APPLICANT: Sekine, Susumu
; APPLICANT: Kikuchi, Yasuhiro
; APPLICANT: Sakurada, Kazuhiro
; APPLICANT: Kyowa Hakko Kogyo Co., Ltd.
; TITLE OF INVENTION: Myocardial Cell Proliferation-Associated Genes
; FILE REFERENCE: 082382-000000US
; CURRENT APPLICATION NUMBER: US/10/258,666
; CURRENT FILING DATE: 2003-05-23
; PRIOR APPLICATION NUMBER: JP 2000-126741
; PRIOR FILING DATE: 2000-04-27
; PRIOR APPLICATION NUMBER: WO PCT/JP01/03700
; PRIOR FILING DATE: 2001-04-27
; NUMBER OF SEQ ID NOS: 42
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 2
; LENGTH: 180
; TYPE: PRT
; ORGANISM: Rattus norvegicus
; FEATURE:
; OTHER INFORMATION: RHDH-009, IGF-II
US-10-258-666-2
```

Query Match 95.7%; Score 177; DB 4; Length 180;  
Best Local Similarity 94.1%; Pred. No. 3.3e-17;  
Matches 32; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

QY 1 DVSTSQAVLPDDPFRYPVGKFFQYDTWROSAGRL 34  
Db 93 DVSTSQAVLPDDPFRYPVGKFFKFDTWROSAGRL 126

RESULT 9  
US-09-745-078A-2

```
; Sequence 2, Application US/09745078A
; Publication No. US20030050434A1
; GENERAL INFORMATION:
; APPLICANT: Garth J. S. COOPER
; APPLICANT: Christina M. BUCHANAN
; TITLE OF INVENTION: PEPTIDE
; FILE REFERENCE: 441842000100
; CURRENT APPLICATION NUMBER: US/09/745,078A
; PRIOR FILING DATE: 2000-12-20
; PRIOR APPLICATION NUMBER: NZ336359
; PRIOR FILING DATE: 1999-06-18
; PRIOR APPLICATION NUMBER: PCT/NZ00/00102
; PRIOR FILING DATE: 2000-06-19
; NUMBER OF SEQ ID NOS: 35
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 2
; LENGTH: 34
; TYPE: PRT
; ORGANISM: Homo Sapien
; FEATURE:
; OTHER INFORMATION: Preptin
US-09-745-078A-2
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Query Match 81.1%; Score 150; DB 3; Length 34;  
Best Local Similarity 79.4%; Pred. No. 4.2e-14;  
Matches 27; Conservative 2; Mismatches 5; Indels 0; Gaps 0;

QY 1 DVSTSQAVLPDDPFRYPVGKFFQYDTWROSAGRL 34  
Db 1 DVSTPPTVLPDNPFRYPVGKFFQYDTWKOSTORL 34

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RESULT 10
US-10-374-624-2
; Sequence 2, Application US/10374624
; Publication No. US20030166561A1
; GENERAL INFORMATION:
; APPLICANT: Garth J. S. COOPER
; APPLICANT: Christina M. BUCHANAN
; TITLE OF INVENTION: PEPTIDE
; FILE REFERENCE: 441842000100
; CURRENT APPLICATION NUMBER: US/10/374,624
; CURRENT FILING DATE: 2003-02-24
; PRIOR APPLICATION NUMBER: US/09/745,078A
; PRIOR FILING DATE: 2000-12-20
; PRIOR APPLICATION NUMBER: NZ336359
; PRIOR FILING DATE: 1999-06-18
; PRIOR APPLICATION NUMBER: PCT/NZ00/00102
; PRIOR FILING DATE: 2000-06-19
; NUMBER OF SEQ ID NOS: 35
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 2
; LENGTH: 34
; TYPE: PRT
; ORGANISM: Homo Sapien
; FEATURE:
; OTHER INFORMATION: Preptin
US-10-374-624-2
```

Query Match 81.1%; Score 150; DB 4; Length 34;  
Best Local Similarity 79.4%; Pred. No. 4.2e-14;  
Matches 27; Conservative 2; Mismatches 5; Indels 0; Gaps 0;

QY 1 DVSTSQAVLPDDPFRYPVGKFFQYDTWROSAGRL 34  
Db 1 DVSTPPTVLPDNPFRYPVGKFFQYDTWKOSTORL 34

RESULT 11  
US-10-632-366-1  
; Sequence 1, Application US/10632366  
; Publication No. US20040142393A1  
; GENERAL INFORMATION:

```

; APPLICANT: COOPER, GARTH JAMES SMITH
; APPLICANT: BUCHANAN, CHRISTINE MARIE
; APPLICANT: JAMES, GABRIEL CHRISTOPHER
; TITLE OF INVENTION: METHODS OF USE OF COMPOUNDS WITH PREPTIN FUNCTION
; FILE REFERENCE: 49123.000033.UTL1
; CURRENT APPLICATION NUMBER: US/10/632,366
; CURRENT FILING DATE: 2003-07-31
; PRIOR APPLICATION NUMBER: 60/400,445
; PRIOR FILING DATE: 2002-08-01
; NUMBER OF SEQ ID NOS: 20
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 1
; LENGTH: 34
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-632-366-1
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Query Match      81.1%; Score 150; DB 4; Length 34;
Best Local Similarity 79.4%; Pred. No. 4.2e-14;
Matches 27; Conservative 2; Mismatches 5; Indels 0; Gaps 0;
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Qy      1 DVSTSQAVLPDDPFRYPVGKFFQYDTWROSAGRL 34
Db      1 DVSTPPTVLPDNPFRYPVGKFFQYDTWKSTQRL 34
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RESULT 12
US-11-066-697-381
; Sequence 381, Application US/11066697
; Publication No. US20050187159A1
; GENERAL INFORMATION:
; APPLICANT: Bridon, Dominique P.
; APPLICANT: Ezrin, Alan M.
; APPLICANT: Milner, Peter G.
; APPLICANT: Holmes, Darren L.
; APPLICANT: Thibudeau, Karen
; TITLE OF INVENTION: PROTECTION OF ENDOGENOUS THERAPEUTIC PEPTIDES FROM
; TITLE OF INVENTION: PEPTIDASE ACTIVITY THROUGH CONJUGATION TO BLOOD
; FILE REFERENCE: 500862002301
; CURRENT APPLICATION NUMBER: US/11/066,697
; CURRENT FILING DATE: 2005-02-25
; PRIOR APPLICATION NUMBER: 09/657,276
; PRIOR FILING DATE: 2000-09-07
; PRIOR APPLICATION NUMBER: 60/153,406
; PRIOR FILING DATE: 1999-09-10
; PRIOR APPLICATION NUMBER: 60/159,783
; PRIOR FILING DATE: 1999-10-15
; NUMBER OF SEQ ID NOS: 1617
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 381
; LENGTH: 35
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
; OTHER INFORMATION: Peptide
US-11-066-697-381
```

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Query Match      81.1%; Score 150; DB 6; Length 35;
Best Local Similarity 79.4%; Pred. No. 4.4e-14;
Matches 27; Conservative 2; Mismatches 5; Indels 0; Gaps 0;
```

```
Qy      1 DVSTSQAVLPDDPFRYPVGKFFQYDTWROSAGRL 34
Db      2 DVSTPPTVLPDNPFRYPVGKFFQYDTWKSTQRL 35
```

```
RESULT 13
US-09-972-809-7
; Sequence 7, Application US/09972809
; Patent No. US20020151490A1
; GENERAL INFORMATION:
```

```

; APPLICANT: Sundeeep, Khosla
; APPLICANT: Conover, Cheryl A.
; TITLE OF INVENTION: TREATMENT OF OSTEOPOROSIS
; FILE REFERENCE: 07039/183001
; CURRENT APPLICATION NUMBER: US/09/972,809
; CURRENT FILING DATE: 2001-10-05
; PRIOR APPLICATION NUMBER: 09/428,226
; PRIOR FILING DATE: 1999-10-27
; PRIOR APPLICATION NUMBER: 60/045,607
; PRIOR FILING DATE: 1997-05-05
; NUMBER OF SEQ ID NOS: 7
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 7
; LENGTH: 156
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-972-809-7
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```
Query Match      81.1%; Score 150; DB 3; Length 156;
Best Local Similarity 79.4%; Pred. No. 2.2e-13;
Matches 27; Conservative 2; Mismatches 5; Indels 0; Gaps 0;
```

```
Qy      1 DVSTSQAVLPDDPFRYPVGKFFQYDTWROSAGRL 34
Db      69 DVSTPPTVLPDNPFRYPVGKFFQYDTWKSTQRL 102
```

```
RESULT 14
US-10-872-198-122
; Sequence 122, Application US/10872198
; Publication No. US20050002897A1
; GENERAL INFORMATION:
; APPLICANT: Ulrich HAUPTS
; APPLICANT: Andre KOLTERMANN
; APPLICANT: Andreas SCHEIDIG
; APPLICANT: Christian VOETSMERIER
; APPLICANT: Ulrich Ketting
; TITLE OF INVENTION: NEW BIOLOGICAL ENTITIES AND USE THEREOF
; FILE REFERENCE: 04156.000204
; CURRENT APPLICATION NUMBER: US/10/872,198
; CURRENT FILING DATE: 2004-06-18
; PRIOR APPLICATION NUMBER: 60/543,518
; PRIOR FILING DATE: 2004-02-11
; PRIOR APPLICATION NUMBER: 60/524,960
; PRIOR FILING DATE: 2003-11-25
; PRIOR APPLICATION NUMBER: EP 04003058
; PRIOR FILING DATE: 2004-02-11
; PRIOR APPLICATION NUMBER: EP 03025871
; PRIOR FILING DATE: 2003-11-11
; PRIOR APPLICATION NUMBER: EP 03025851
; PRIOR FILING DATE: 2003-11-10
; PRIOR APPLICATION NUMBER: EP 03013819
; PRIOR FILING DATE: 2003-06-18
; NUMBER OF SEQ ID NOS: 149
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 122
; LENGTH: 156
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-872-198-122
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Query Match      81.1%; Score 150; DB 5; Length 156;
Best Local Similarity 79.4%; Pred. No. 2.2e-13;
Matches 27; Conservative 2; Mismatches 5; Indels 0; Gaps 0;
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```
Qy      1 DVSTSQAVLPDDPFRYPVGKFFQYDTWROSAGRL 34
Db      69 DVSTPPTVLPDNPFRYPVGKFFQYDTWKSTQRL 102
```

```
RESULT 15
US-11-021-951-122
; Sequence 122, Application US/11021951
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/ Publication No. US20050175581A1
/ GENERAL INFORMATION:
/ APPLICANT: HAUPTS, Ulrich
/ APPLICANT: KOLTERMANN, Andre
/ APPLICANT: SCHEIDIG, Andreas
/ APPLICANT: VOTSMEIER, Christian
/ APPLICANT: Ketting, Ulrich
/ APPLICANT: COCO, Wayne Michael
/ TITLE OF INVENTION: New Biological Entities And The Pharmaceutical
/ TITLE OF INVENTION: And Diagnostic Use Thereof
/ FILE REFERENCE: 04156.000205
/ CURRENT APPLICATION NUMBER: US/11/021,951
/ CURRENT FILING DATE: 2004-12-22
/ PRIOR APPLICATION NUMBER: 10/872,198
/ PRIOR FILING DATE: 2004-06-18
/ PRIOR APPLICATION NUMBER: 60/543,518
/ PRIOR FILING DATE: 2004-02-11
/ PRIOR APPLICATION NUMBER: 60/524,960
/ PRIOR FILING DATE: 2003-11-25
/ PRIOR APPLICATION NUMBER: EP 04003058
/ PRIOR FILING DATE: 2004-02-11
/ PRIOR APPLICATION NUMBER: EP 03025871
/ PRIOR FILING DATE: 2003-11-11
/ PRIOR APPLICATION NUMBER: EP 03025851
/ PRIOR FILING DATE: 2003-11-10
/ PRIOR APPLICATION NUMBER: EP 03013819
/ PRIOR FILING DATE: 2003-06-18
/ NUMBER OF SEQ ID NOS: 191
/ SOFTWARE: PatentIn version 3.1
/ SEQ ID NO 122
/ LENGTH: 156
/ TYPE: PRT
/ ORGANISM: Homo sapiens
/ US-11-021-951-122

Query Match      81.1%; Score 150; DB 6; Length 156;
Best Local Similarity 79.4%; Pred. No. 2,2e-13;
Matches 27; Conservative 2; Mismatches 5; Indels 0; Gaps 0;

QY      1 DVSTQAVLPDDPFRYPVGKFFQYDTWRQSGARL 34
      |||||:|||||:|||||:|||||:|||||
Db      69 DVSTPPTVLPDNPFRYPVGKFFQYDTWKQSTORL 102
```

Search completed: May 21, 2006, 12:53:43  
Job time : 103.333 secs

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; Sequence 393, Application US/10505928
; Publication No. US20060088532A1
; GENERAL INFORMATION:
; APPLICANT: Ludwig Institute for Cancer Research et al.
; TITLE OF INVENTION: LYMPHATIC ENDOTHELIAL GENES
; FILE REFERENCE: 28967/39178
; CURRENT APPLICATION NUMBER: US/10/505,928
; CURRENT FILING DATE: 2004-08-27
; PRIOR APPLICATION NUMBER: US 60/363,019
; PRIOR FILING DATE: 2002-03-07
; NUMBER OF SEQ ID NOS: 866
; SOFTWARE: Patentin 3.2
; SEQ ID NO 393
; LENGTH: 667
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-505-928-393
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Query Match      20.8%; Score 38.5; DB 6; Length 667;
Best Local Similarity 31.1%; Pred. No. 1.7e+02;
Matches 14; Conservative 1; Mismatches 15; Indels 15; Gaps 2;
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```
QY      3  TSGAVLPDDPPRYPVK-----FQY-----DTWRQAG 32
Db      188  SASADYNRDSFGYPSKSPATSTFPSSFFWQDGHSSDPWSSSSG 232
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RESULT 14
US-11-271-008-7
; Sequence 7, Application US/11271008
; Publication No. US20060093610A1
; GENERAL INFORMATION:
; APPLICANT: Lang, Alois B.
; APPLICANT: Horn, Michael P.
; APPLICANT: Imboden, Martin A.
; TITLE OF INVENTION: Human Monoclonal Antibody Specific for Lipopolysaccharides (LPS)
; FILE REFERENCE: 29474-5015
; CURRENT APPLICATION NUMBER: US/11/271,008
; CURRENT FILING DATE: 2005-11-10
; PRIOR APPLICATION NUMBER: PCT/EP2004/004485
; PRIOR FILING DATE: 2004-04-28
; PRIOR APPLICATION NUMBER: EP 03 010 836.9
; PRIOR FILING DATE: 2003-05-14
; NUMBER OF SEQ ID NOS: 14
; SOFTWARE: Patentin version 3.3
; SEQ ID NO 7
; LENGTH: 107
; TYPE: PRT
; ORGANISM: Homo sapiens
US-11-271-008-7
```

```
Query Match      20.5%; Score 38; DB 7; Length 107;
Best Local Similarity 30.8%; Pred. No. 25;
Matches 8; Conservative 5; Mismatches 13; Indels 0; Gaps 0;
```

```
QY      4  TSGAVLPDDPPRYPVGKFFQYDTWRQ 29
Db      74  TISLQPDPPATYCCQYKSYVFGQ 99
```

```
RESULT 15
US-10-505-928-300
; Sequence 300, Application US/10505928
; Publication No. US20060088532A1
; GENERAL INFORMATION:
; APPLICANT: Ludwig Institute for Cancer Research et al.
; TITLE OF INVENTION: LYMPHATIC ENDOTHELIAL GENES
; FILE REFERENCE: 28967/39178
; CURRENT APPLICATION NUMBER: US/10/505,928
; CURRENT FILING DATE: 2004-08-27
; PRIOR APPLICATION NUMBER: US 60/363,019
; PRIOR FILING DATE: 2002-03-07
```

```
; NUMBER OF SEQ ID NOS: 866
; SOFTWARE: Patentin 3.2
; SEQ ID NO 300
; LENGTH: 847
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-505-928-300
```

```
Query Match      20.5%; Score 38; DB 6; Length 847;
Best Local Similarity 46.7%; Pred. No. 2.6e+02;
Matches 7; Conservative 3; Mismatches 5; Indels 0; Gaps 0;
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```
QY      4  TSGAVLPDDPPRYPV 18
Db      376  TMTVLPEALRWPV 390
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Search completed: May 21, 2006, 12:54:00
Job time : 4 secs
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```
Publication No. US20060088532A1
GENERAL INFORMATION:
APPLICANT: Ludwig Institute for Cancer Research et al.
TITLE OF INVENTION: LYMPHATIC ENDOTHELIAL GENES
FILE REFERENCE: 28967/39178
CURRENT APPLICATION NUMBER: US/10/505,928
CURRENT FILING DATE: 2004-08-27
PRIOR APPLICATION NUMBER: US 60/363,019
PRIOR FILING DATE: 2002-03-07
NUMBER OF SEQ ID NOS: 866
SOFTWARE: PatentIn 3.2
SEQ ID NO 449
LENGTH: 3396
TYPE: PRT
ORGANISM: Homo sapiens
US-10-505-928-449

Query Match      21.4%; Score 39.5; DB 6; Length 3396;
Best Local Similarity 25.6%; Pred. No. 7.7e+02;
Matches 8; Conservative 5; Mismatches 13; Indels 1; Gaps 1;

QY      2 VSTQAVLPDDPPRYPVGKFFQYDTWR 28
Db      3226 IGLNDKMFHDHFWMTDGSTLQYENMR 3251

RESULT 10
US-11-249-111-102
Sequence 102, Application US/11249111
Publication No. US20060099623A1
GENERAL INFORMATION:
APPLICANT: Glenn, Matthew
APPLICANT: Lubbers, Mark W
APPLICANT: Dekker, James
TITLE OF INVENTION: Polynucleotides and polypeptides isolated from Lactobacillus
TITLE OF INVENTION: and methods for their use.
FILE REFERENCE: 13353.1048uic2
CURRENT APPLICATION NUMBER: US/11/249,111
CURRENT FILING DATE: 2005-10-11
PRIOR APPLICATION NUMBER: 10/288,930
PRIOR FILING DATE: 2002-11-05
PRIOR APPLICATION NUMBER: 09/724,623
PRIOR FILING DATE: 2000-11-28
PRIOR APPLICATION NUMBER: 60/148,801
PRIOR FILING DATE: 1999-12-02
NUMBER OF SEQ ID NOS: 124
SOFTWARE: FastSeq for Windows Version 4.0
SEQ ID NO 102
LENGTH: 323
TYPE: PRT
ORGANISM: Lactobacillus rhamnosus
US-11-249-111-102

Query Match      21.1%; Score 39; DB 7; Length 323;
Best Local Similarity 33.3%; Pred. No. 64;
Matches 8; Conservative 5; Mismatches 11; Indels 0; Gaps 0;

QY      2 VSTQAVLPDDPPRYPVGKFFQYD 25
Db      7 ISATQHHPDCCDIPRTGDSFFD 30

RESULT 11
US-10-511-937-2979
Sequence 2979, Application US/10511937
Publication No. US2006008836A1
GENERAL INFORMATION:
APPLICANT: EXPRESSION DIAGNOSTICS, INC.
APPLICANT: Wohlgenuth, Jay
APPLICANT: Fry, Kirk
APPLICANT: Woodward, Robert
APPLICANT: Ly, Ngoc
APPLICANT: Prentice, James
```

```
APPLICANT: Morris, MacDonald
APPLICANT: Rosenberg, Steven
TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR DIAGNOSING
TITLE OF INVENTION: AND MONITORING TRANSPLANT REJECTION
FILE REFERENCE: 506612000104
CURRENT APPLICATION NUMBER: US/10/511,937
CURRENT FILING DATE: 2004-10-19
PRIOR APPLICATION NUMBER: PCT/US2003/012946
PRIOR FILING DATE: 2003-04-24
PRIOR APPLICATION NUMBER: US 10/131,831
PRIOR FILING DATE: 2002-04-24
PRIOR APPLICATION NUMBER: US 10/325,899
PRIOR FILING DATE: 2002-12-20
NUMBER OF SEQ ID NOS: 3117
SOFTWARE: PatentIn version 3.2
SEQ ID NO 2979
LENGTH: 325
TYPE: PRT
ORGANISM: Homo sapiens
US-10-511-937-2979

Query Match      21.1%; Score 39; DB 6; Length 325;
Best Local Similarity 42.1%; Pred. No. 64;
Matches 8; Conservative 2; Mismatches 9; Indels 0; Gaps 0;

QY      5 SQAVLPDDPPRYPVGKFFQ 23
Db      153 SSSLPDDHSSYTVPGYMQ 171

RESULT 12
US-10-511-937-2992
Sequence 2992, Application US/10511937
Publication No. US2006008836A1
GENERAL INFORMATION:
APPLICANT: EXPRESSION DIAGNOSTICS, INC.
APPLICANT: Wohlgenuth, Jay
APPLICANT: Fry, Kirk
APPLICANT: Woodward, Robert
APPLICANT: Ly, Ngoc
APPLICANT: Prentice, James
APPLICANT: Morris, MacDonald
APPLICANT: Rosenberg, Steven
TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR DIAGNOSING
TITLE OF INVENTION: AND MONITORING TRANSPLANT REJECTION
FILE REFERENCE: 506612000104
CURRENT APPLICATION NUMBER: US/10/511,937
CURRENT FILING DATE: 2004-10-19
PRIOR APPLICATION NUMBER: PCT/US2003/012946
PRIOR FILING DATE: 2003-04-24
PRIOR APPLICATION NUMBER: US 10/131,831
PRIOR FILING DATE: 2002-04-24
PRIOR APPLICATION NUMBER: US 10/325,899
PRIOR FILING DATE: 2002-12-20
NUMBER OF SEQ ID NOS: 3117
SOFTWARE: PatentIn version 3.2
SEQ ID NO 2992
LENGTH: 1333
TYPE: PRT
ORGANISM: Homo sapiens
US-10-511-937-2992

Query Match      21.1%; Score 39; DB 6; Length 1333;
Best Local Similarity 50.0%; Pred. No. 3.2e+02;
Matches 7; Conservative 3; Mismatches 4; Indels 0; Gaps 0;

QY      3 STQAVLPDDPPRY 16
Db      587 ASGEAVYCDIPRY 600

RESULT 13
US-10-505-928-393
```

US-11-254-679-13

Query Match 22.2%; Score 41; DB 7; Length 109;  
Best Local Similarity 34.6%; Pred. No. 9.6;  
Matches 9; Conservative 5; Mismatches 12; Indels 0; Gaps 0;

QY 4 TSOAVLPDDFFPRYPVGKFGQYDTWRQ 29  
|::|||::|::|::|  
DB 77 TISSLPDDPRTYYCQGYNSFTTGG 102

RESULT 6  
US-11-264-784-112

; Sequence 112; Application US/11264784  
; Publication No. US20060094092A1  
; GENERAL INFORMATION:  
; APPLICANT: E.I. duPont de Nemours & Co., Inc.  
; APPLICANT: Damude, Howard Glenn  
; APPLICANT: Gillies, Peter John  
; APPLICANT: Maccoll, Daniel Joseph  
; APPLICANT: Picataggio, Stephen K.  
; APPLICANT: Pollak, Dana M. Walters  
; APPLICANT: Ragghianti, James John  
; APPLICANT: Xue, Zhixiong  
; APPLICANT: Yadav, Narendra S.  
; APPLICANT: Zhang, Hongxiang  
; APPLICANT: Zhu, Qium  
; TITLE OF INVENTION: HIGH ARACHIDONIC ACID PRODUCING STRAINS OF VARROVIA LIPOLYTICA  
; FILE REFERENCE: C13136 USNA  
; CURRENT APPLICATION NUMBER: US/11/264,784  
; CURRENT FILING DATE: 2005-11-01  
; NUMBER OF SEQ ID NOS: 375  
; SOFTWARE: PatentIn version 3.3  
; SEQ ID NO 112  
; LENGTH: 477  
; TYPE: PRT  
; ORGANISM: Saccharomyces cerevisiae (Genbank Accession No. NP\_010935)  
US-11-264-784-112

Query Match 21.9%; Score 40.5; DB 7; Length 477;  
Best Local Similarity 30.4%; Pred. No. 61;  
Matches 7; Conservative 7; Mismatches 8; Indels 1; Gaps 1;

QY 5 SQAVLPDDFFPRYPVGKFGQYDTW 27  
|::|||::|::|::|  
DB 26 TNAIMSDNSKAYSI-KFLTFNTW 47

RESULT 7  
US-10-196-749-368

; Sequence 368; Application US/10196749  
; Publication No. US20060094864A1  
; GENERAL INFORMATION:  
; APPLICANT: Baker, Kevin P.  
; APPLICANT: Chen, Jian  
; APPLICANT: Desnoyers, Luc  
; APPLICANT: Goddard, Audrey  
; APPLICANT: Godowski, Paul J.  
; APPLICANT: Gurney, Austin L.  
; APPLICANT: Pan, James  
; APPLICANT: Smith, Victoria  
; APPLICANT: Watanabe, Colin K.  
; APPLICANT: Wood, William I.  
; APPLICANT: Zhang, Zemin  
; TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC  
; FILE REFERENCE: P3430R1C340  
; CURRENT APPLICATION NUMBER: US/10/196,749  
; CURRENT FILING DATE: 2002-07-16  
; PRIOR APPLICATION NUMBER: 10/052586  
; PRIOR FILING DATE: 2002-01-15  
; PRIOR APPLICATION NUMBER: 60/059263  
; PRIOR FILING DATE: 1997-09-18

; PRIOR APPLICATION NUMBER: 60/059266  
; PRIOR FILING DATE: 1997-09-18  
; PRIOR APPLICATION NUMBER: 60/062250  
; PRIOR FILING DATE: 1997-10-17  
; PRIOR APPLICATION NUMBER: 60/063120  
; PRIOR FILING DATE: 1997-10-24  
; PRIOR APPLICATION NUMBER: 60/063121  
; PRIOR FILING DATE: 1997-10-24  
; PRIOR APPLICATION NUMBER: 60/063486  
; PRIOR FILING DATE: 1997-10-21  
; PRIOR APPLICATION NUMBER: 60/063540  
; PRIOR FILING DATE: 1997-10-28  
; PRIOR APPLICATION NUMBER: 60/063541  
; PRIOR FILING DATE: 1997-10-28  
; PRIOR APPLICATION NUMBER: 60/063544  
; PRIOR FILING DATE: 1997-10-28  
; PRIOR APPLICATION data removed - See File Wrapper or PALM.  
; NUMBER OF SEQ ID NOS: 612  
; SEQ ID NO 368  
; LENGTH: 121  
; TYPE: PRT  
; ORGANISM: Homo Sapien  
US-10-196-749-368

Query Match 21.4%; Score 39.5; DB 6; Length 121;  
Best Local Similarity 40.0%; Pred. No. 18;  
Matches 10; Conservative 2; Mismatches 8; Indels 5; Gaps 1;

QY 7 AVLPDDFFPRYPVGKFGQYDTWROSA 31  
|::|||::|::|::|  
DB 21 AVLTDPVQGPVPTL-----WNEPA 40

RESULT 8  
US-11-154-103-9

; Sequence 9; Application US/11154103  
; Publication No. US20060099205A1  
; GENERAL INFORMATION:  
; APPLICANT: ADAMS, GREGORY P.  
; APPLICANT: HORAK, EVA M.  
; APPLICANT: WEINER, LOUIS M.  
; APPLICANT: JAMES, MARKS D.  
; TITLE OF INVENTION: BISPECIFIC SINGLE CHAIN Fv ANTIBODY MOLECULES AND METHODS OF USE  
; FILE REFERENCE: 407T-000420US  
; CURRENT APPLICATION NUMBER: US/11/154,103  
; CURRENT FILING DATE: 2005-06-15  
; PRIOR APPLICATION NUMBER: US 60/370,276  
; PRIOR FILING DATE: 2002-04-02  
; PRIOR APPLICATION NUMBER: US10/406,830  
; PRIOR FILING DATE: 2003-04-04  
; NUMBER OF SEQ ID NOS: 57  
; SOFTWARE: PatentIn version 3.3  
; SEQ ID NO 9  
; LENGTH: 291  
; TYPE: PRT  
; ORGANISM: Artificial  
; FEATURE:  
; OTHER INFORMATION: Synthetic antibody.  
US-11-154-103-9

Query Match 21.4%; Score 39.5; DB 7; Length 291;  
Best Local Similarity 31.0%; Pred. No. 48;  
Matches 9; Conservative 5; Mismatches 14; Indels 1; Gaps 1;

QY 4 TSOAVLPDDFFPRYPVGKFGQYDTWROSA 32  
|::|||::|::|::|  
DB 234 TISSLPDDPRTYYCQGYNY-FWTFGRG 261

RESULT 9  
US-10-505-928-449

; Sequence 449; Application US/10505928

TYPE: PRT  
ORGANISM: Homo sapiens  
US-11-301-554-1817

Query Match 23.5% Score 43.5; DB 7; Length 357;  
Best Local Similarity 47.6%; Pred. No. 16;  
Matches 10; Conservative 1; Mismatches 9; Indels 1; Gaps 1;

QY 13 FPRYPVGKFFQYDTWRQSA 31  
DB 294 YPTYPVG-FAMYPVGRDQGR 313

RESULT 2  
US-10-511-937-2452  
Sequence 2452, Application US/10511937  
Publication No. US20060088532A1  
GENERAL INFORMATION:  
APPLICANT: EXPRESSION DIAGNOSTICS, INC.  
FILE REFERENCE: Wohlgenuth, Jay  
APPLICANT: Fry, Kirk  
APPLICANT: Woodward, Robert  
APPLICANT: Ly, Ngoc  
APPLICANT: Prentice, James  
APPLICANT: Morris, MacDonald  
APPLICANT: Rosenberg, Steven  
TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR DIAGNOSING  
TITLE OF INVENTION: AND MONITORING TRANSPLANT REJECTION  
FILE REFERENCE: 50661200104  
CURRENT APPLICATION NUMBER: US/10/511.937  
CURRENT FILING DATE: 2004-10-19  
PRIOR APPLICATION NUMBER: PCT/US2003/012946  
PRIOR FILING DATE: 2003-04-24  
PRIOR APPLICATION NUMBER: US 10/131,831  
PRIOR FILING DATE: 2002-04-24  
PRIOR APPLICATION NUMBER: US 10/325,899  
PRIOR FILING DATE: 2002-12-20  
NUMBER OF SEQ ID NOS: 3117  
SOFTWARE: PatentIn version 3.2  
SEQ ID NO 2452  
LENGTH: 1043  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-10-511-937-2452

Query Match 22.7% Score 42; DB 6; Length 1043;  
Best Local Similarity 42.9%; Pred. No. 91;  
Matches 9; Conservative 4; Mismatches 8; Indels 0; Gaps 0;

QY 11 DDFPRYPVGKFFQYDTWRQSA 31  
DB 549 DDYFVDTRIARFRDLSALVSA 569

RESULT 3  
US-10-505-928-48  
Sequence 48, Application US/10505928  
Publication No. US20060088532A1  
GENERAL INFORMATION:  
APPLICANT: Ludwig Institute for Cancer Research et al.  
FILE REFERENCE: LYMPHATIC ENDOTHELIAL GENES  
CURRENT APPLICATION NUMBER: US/10/505,928  
CURRENT FILING DATE: 2004-08-27  
PRIOR APPLICATION NUMBER: US 60/363,019  
PRIOR FILING DATE: 2002-03-07  
NUMBER OF SEQ ID NOS: 866  
SOFTWARE: PatentIn 3.2  
SEQ ID NO 48  
LENGTH: 492  
TYPE: PRT  
ORGANISM: Homo sapiens  
FEATURE:

OTHER INFORMATION: KIAA0062  
US-10-505-928-48

Query Match 22.4% Score 41.5; DB 6; Length 492;  
Best Local Similarity 45.0%; Pred. No. 46;  
Matches 9; Conservative 6; Mismatches 4; Indels 1; Gaps 1;

QY 2 VSTSQAVLPDDFPRYPVGK 21  
DB 367 ISTSVAILCEFP-HELGD 385

RESULT 4  
US-10-505-928-408  
Sequence 408, Application US/10505928  
Publication No. US20060088532A1  
GENERAL INFORMATION:  
APPLICANT: Ludwig Institute for Cancer Research et al.  
FILE REFERENCE: 28967/39178  
CURRENT APPLICATION NUMBER: US/10/505,928  
CURRENT FILING DATE: 2004-08-27  
PRIOR APPLICATION NUMBER: US 60/363,019  
PRIOR FILING DATE: 2002-03-07  
NUMBER OF SEQ ID NOS: 866  
SOFTWARE: PatentIn 3.2  
SEQ ID NO 408  
LENGTH: 531  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-10-505-928-408

Query Match 22.4% Score 41.5; DB 6; Length 531;  
Best Local Similarity 45.0%; Pred. No. 50;  
Matches 9; Conservative 6; Mismatches 4; Indels 1; Gaps 1;

QY 2 VSTSQAVLPDDFPRYPVGK 21  
DB 406 ISTSVAILCEFP-HELGD 424

RESULT 5  
US-11-254-679-13  
Sequence 13, Application US/11254679  
Publication No. US20060099207A1  
GENERAL INFORMATION:  
APPLICANT: Wu, Herren  
APPLICANT: Allan, Christian  
APPLICANT: Gao, Changshou  
APPLICANT: An, Ling-Ling  
APPLICANT: Kiener, Peter  
APPLICANT: Mao, Su-Yau  
APPLICANT: Coyly, Anthony  
TITLE OF INVENTION: High Affinity Antibodies Against HMGB1 and Method of Use Thereof  
FILE REFERENCE: HB601US  
CURRENT APPLICATION NUMBER: US/11/254,679  
CURRENT FILING DATE: 2005-10-21  
PRIOR APPLICATION NUMBER: 60/620,726  
PRIOR FILING DATE: 2004-10-22  
PRIOR APPLICATION NUMBER: 60/651,512  
PRIOR FILING DATE: 2005-02-10  
PRIOR APPLICATION NUMBER: 60/658,572  
PRIOR FILING DATE: 2005-03-07  
PRIOR APPLICATION NUMBER: 60/662,944  
PRIOR FILING DATE: 2005-03-18  
PRIOR APPLICATION NUMBER: 60/713,712  
PRIOR FILING DATE: 2005-09-09  
NUMBER OF SEQ ID NOS: 103  
SOFTWARE: PatentIn version 3.3  
SEQ ID NO 13  
LENGTH: 109  
TYPE: PRT  
ORGANISM: Homo sapiens

GenCore version 5.1.8  
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OM protein - protein search, using sw model

Run on: May 21, 2006, 12:48:45 ; Search time 4 Seconds

(without alignments)  
18.157 Million cell updates/sec

Title: US-10-632-366-3

Perfect score: 185  
Sequence: 1 DVSTQAVLPDPFRYPVKGKFGYDFTWRQAGRL 34

Scoring table:

BIOSUM62

Searched: Gapop 10.0 , Gapext 0.5

Total number of hits satisfying chosen parameters: 21570

Minimum DB seq length: 0

Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%

Maximum Match 100%  
Listing first 45 summaries

Database :

1: Published Applications AA New:\*  
2: /EMC\_Celerra\_SIDS3/pcodata/2/pubppaa/US09\_NEW\_PUB pep:\*  
3: /EMC\_Celerra\_SIDS3/pcodata/2/pubppaa/US06\_NEW\_PUB pep:\*  
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8: /EMC\_Celerra\_SIDS3/pcodata/2/pubppaa/US60\_NEW\_PUB pep:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

#### SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	43.5	23.5	357	US-11-301-554-1817	Sequence 1817, App
2	42	22.7	1043	US-10-511-937-2452	Sequence 2452, App
3	41.5	22.4	492	US-10-505-928-48	Sequence 48, App
4	41.5	22.4	531	US-10-505-928-408	Sequence 408, App
5	41	21.2	109	US-11-254-679-13	Sequence 13, App
6	40.5	21.9	477	US-11-264-784-112	Sequence 112, App
7	39.5	21.4	121	US-10-196-749-368	Sequence 368, App
8	39.5	21.4	291	US-11-154-103-9	Sequence 9, App
9	39.5	21.4	3396	US-10-505-928-49	Sequence 49, App
10	39	21.1	323	US-11-249-111-102	Sequence 102, App
11	39	21.1	325	US-10-511-937-2979	Sequence 2979, App
12	39	21.1	1333	US-10-511-937-2992	Sequence 2992, App
13	38.5	20.8	667	US-10-505-928-393	Sequence 393, App
14	38	20.5	107	US-11-271-008-7	Sequence 7, App
15	38	20.5	847	US-10-505-928-400	Sequence 300, App
16	37.5	20.3	153	US-11-314-018-10	Sequence 10, App
17	37.5	20.3	1332	US-11-314-018-18	Sequence 18, App
18	37	20.0	172	US-11-305-447-13	Sequence 13, App
19	37	20.0	197	US-11-305-447-11	Sequence 11, App
20	37	20.0	232	US-11-305-447-6	Sequence 6, App
21	37	20.0	257	US-11-305-447-2	Sequence 2, App
22	37	20.0	267	US-11-024-544A-141	Sequence 141, App
23	37	20.0	267	US-11-024-545-63	Sequence 63, App
24	37	20.0	267	US-11-251-466-37	Sequence 37, App
25	37	20.0	267	US-11-254-173-48	Sequence 48, App

26	37	20.0	267	US-11-264-784-51	Sequence 51, App
27	37	20.0	493	US-10-511-937-2993	Sequence 2993, App
28	37	20.0	418	US-10-196-749-110	Sequence 110, App
29	37	20.0	477	US-11-024-544A-118	Sequence 118, App
30	37	20.0	477	US-11-024-545-46	Sequence 46, App
31	37	20.0	477	US-11-185-301-34	Sequence 34, App
32	37	20.0	477	US-11-190-750-101	Sequence 101, App
33	37	20.0	477	US-11-251-466-20	Sequence 20, App
34	37	20.0	477	US-11-254-173-34	Sequence 34, App
35	37	20.0	477	US-11-264-784-28	Sequence 28, App
36	37	20.0	640	US-11-245-628-27	Sequence 27, App
37	37	20.0	2026	US-10-505-928-831	Sequence 831, App
38	36.5	19.7	92	US-10-546-594-84	Sequence 84, App
39	36.5	19.7	100	US-10-546-594-117	Sequence 117, App
40	36.5	19.7	108	US-10-546-594-72	Sequence 72, App
41	36.5	19.7	108	US-10-546-594-74	Sequence 74, App
42	36.5	19.7	108	US-10-546-594-76	Sequence 76, App
43	36.5	19.7	108	US-10-546-594-78	Sequence 78, App
44	36.5	19.7	108	US-10-546-594-80	Sequence 80, App
45	36.5	19.7	125	US-10-546-594-121	Sequence 121, App

#### ALIGNMENTS

RESULT 1  
US-11-301-554-1817  
Sequence 1817, Application US/11301554  
Publication No. US20060088527A1  
GENERAL INFORMATION:  
APPLICANT: Henderson, Robert A.  
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APPLICANT: Vedvick, Thomas S.  
APPLICANT: Bangur, Chaitanya S.  
APPLICANT: McNabb, Andria  
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY  
TITLE OF INVENTION: AND DIAGNOSIS OF LUNG CANCER  
FILE REFERENCE: 210121.478C21  
CURRENT APPLICATION NUMBER: US/11301,554  
PRIOR FILING DATE: 2005-12-13  
PRIOR APPLICATION NUMBER: US 10/283,017  
PRIOR FILING DATE: 2002-10-28  
PRIOR APPLICATION NUMBER: US 10/113,872  
PRIOR FILING DATE: 2002-03-28  
PRIOR APPLICATION NUMBER: US 10/017,754  
PRIOR FILING DATE: 2001-10-29  
PRIOR APPLICATION NUMBER: US 09/902,941  
PRIOR FILING DATE: 2001-07-10  
PRIOR APPLICATION NUMBER: US 09/849,626  
PRIOR FILING DATE: 2001-05-03  
PRIOR APPLICATION NUMBER: US 09/736,457  
PRIOR FILING DATE: 2000-12-13  
PRIOR APPLICATION NUMBER: US 09/702,705  
PRIOR FILING DATE: 2000-10-30  
PRIOR APPLICATION NUMBER: US 09/677,419  
PRIOR FILING DATE: 2000-10-06  
PRIOR APPLICATION NUMBER: US 09/671,325  
PRIOR FILING DATE: 2000-09-26  
PRIOR APPLICATION NUMBER: US 09/658,824  
PRIOR FILING DATE: 2000-09-08  
Remaining Prior Application data removed - See File Wrapper or PALM.  
NUMBER OF SEQ ID NOS: 2157  
SOFTWARE: FastSeq for Windows Version 4.0  
SEQ ID NO 1817  
LENGTH: 357